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WHEN a farmer, who visits the metropolis once a year, stares into the shop windows in Broadway, and stops now and then with an indefinite curiosity at the corners of the streets, the citizens smile, with the satisfaction of superior knowledge, at the awkward airs of the countryman in town.

But how shall we describe the conduct of the true *cockneys* in the country? How shall we find words to express our horror and pity at the cockneyisms with which they deform the landscape? How shall we paint, without the aid of HOGARTH and CRUIKSHANKS, the ridiculous insults which they often try to put upon nature and truth in their cottages and country seats?

The countryman in town is at least modest. He has, perhaps, a mysterious though mistaken respect for men who live in such prodigiously fine houses, who drive in coaches with liveried servants, and pay thousands for the transfer of little scraps of paper, which they call stocks.

But the true cit is brazen and impertinent in the country. Conscious that his clothes are designed, his hat fabricated, his tilbury built, by the only *artists* of their several professions on this side of the Atlantic, he pities and despises all who do not bear the outward stamp of the same coinage. He comes in the country to rusticate, (that is, to recruit his purse and his digestion,) very much as he turns his horse out to grass; as a means of gaining strength sufficient to go back again to the only arena in which it is worth while to exhibit his powers. He wonders how people can live in the country from choice, and asks a solemn question, now and then, about passing the winter there, as he would about a passage through Behring's Straits, or a pic-nic on the borders of the Dead Sea.

But this is all very harmless. On their own ground, country folks have the advantage of the cockneys. The scale is turned then; and knowing perfectly well how to mow, cradle, build stone walls and drive oxen,—undeniably useful and substantial kinds of knowledge,—they are scarcely less amused at the fine airs and droll ignorances of the cockney in the country, who does not know a bull-rush from a butternut, than the citizens are in town at their ignorance of an air of the new opera, or the step of the last redowa.

But if the cockney visitor is harmless, the cockney resident is not. When the downright citizen retires to the country,—not because he has any taste for it, but be-

cause it is the fashion to have a country house,—he often becomes, perhaps for the first time in his life, a dangerous member of society. There is always a certain influence about the mere possessor of wealth, that dazzles us, and makes us see things in a false light; and the cockney has wealth. As he builds a house which costs five times as much as that of any of his country neighbors, some of them, who take it for granted that wealth and taste go together, fancy the cockney house puts their simple, modest cottages to the blush. Hence, they directly go to imitating it in their moderate way; and so, a quiet country neighborhood is as certainly tainted with the malaria of cockneyism, as it would be by a ship-fever, or the air of the Pontine marshes.

There are, to be sure, some cockneyisms so gross that, like an overdose of poison, they have a salutary effect, by rousing nature to make a struggle and throw it off. We must be allowed to quote a couple of instances of this kind, (mentioning no names,) which have come under our observation lately.

A few miles from Brooklyn, N. Y., on a commanding point of land, is to be seen the country house of a cockney millionaire. It is built of red brick, at a cost of some $12,000. It stands bolt upright, *five stories high*, with windows in the front and rear, town house street door, steps and railing, and not a window on either of the two remaining sides. In fact, it is a precise copy of a first class house in Tenth-street,—*minus the rest of the row on each side of it!* Poor tenement! There was, as we gazed on it, not a tree growing near it, though a straight road, leading up to it, had been planted with a beggarly assortment of some street trees. It looked, in its utter want of association with all about it, as if it had been brought out there by some designing city friend, who had forgotten to "introduce it" to the rustic neighborhood.

On a noble promontory of land, in a part of the Hudson which shall be nameless, is a villa, built of wood, in the style of the Parthenon. The situation is so simple and grand,—a broad plain, bordered by a natural belt of fine trees,—that any one, with half a grain of taste, would have felt, at a glance, that the key to all the "improvements" to be made there, must be found in merely following nature's hint, and by a liberal grouping of trees, to have converted the whole into a fine park. The thing were as easily done, if rightly conceived, as for the owner to have written his name at the bottom of the check to pay for it.

Well, how do our readers think this cockney has improved his country residence? How has he elevated and heightened the beauty of this noble plain, skirted with stately trees, and ornamented with his classical copy of the Parthenon?

By running a post and chain fence, in a circle, round the house, and stretching a grape arbor up and down the plain on both sides of it!

After that, only one thing remained; and it was done. A silver plate on the front door bears, neatly engraved, the name of —— ——, Esq., the proprietor!

Now, if any of our readers will give us certified documents, to prove that any countryman was ever so foolish as to build a house in town, for the purpose of threshing his grain in the front parlor, and shelling his corn in the library, we will confess that cockneys have the best of it.

But, as we have already remarked, such gross examples as these are not those which are really dangerous in the country. The cockneyisms which are fatal to the

peace of mind, and more especially to the right feeling of persons of good sense and propriety in the country, are those which have perhaps a real meaning and value in town; which are associated with excellent houses and people there; and which are only absurd and foolish when transplanted, without the least reflection or adaptation, into the wholly different and distinct condition of things in country life.

It would be too long and troublesome a task to give a catalogue of these sins against good sense and good taste, which we every day see perpetrated by people who come from town, and who, we are bound to say, are far from always being cockneys; but who, nevertheless, unthinkingly perpetrate these ever to be condemned cockneyisms. Among them, we may enumerate, as illustrations,—building large houses, only to shut up the best rooms and live in the basement; placing the first story so high as to demand a long flight of steps to get into the front door; placing the dining-room below stairs, when there is abundant space on the first floor; using the iron railings of street doors in town to porches and piazzas in the country; arranging suits of parlors with folding doors, precisely like a town house, where other and far more convenient arrangements could be made; introducing plate glass windows, and ornate stucco cornices in cottages of moderate size and cost; building large parlors for display, and small bed-rooms for daily use; placing the house so near the street (with acres of land in the rear) as to destroy all seclusion, and secure all possible dust; and all the hundred like expedients, for producing the utmost *effect* in a small space in town, which are wholly unnecessary and uncalled for in the country.

We remember few things more unpleasant than to enter a cockney house in the country. As the highest ideal of beauty in the mind of its owner is to re-produce, as nearly as possible, a fac-simile of a certain kind of town house, one is distressed with the entire want of fitness and appropriateness in everything it contains. The furniture is all made for display, not for use; and between a profusion of gilt ornaments, embroidered white satin chairs, and other like finery, one feels that one has no rest for the sole of his foot.

We do not mean, by these remarks, to have it understood that we do not admire really beautiful, rich and tasteful furniture, or ornaments and decorations belonging to the interior and exterior of houses in the country. But we only admire them when they are introduced in the right manner and the right place. In a country house of large size—a mansion of the first class—where there are rooms in abundance for all purposes, and where a feeling of comfort, luxury, and wealth, reigns throughout, there is no reason why the most beautiful and highly finished decorations should not be seen in its drawing-room or saloon,—always supposing them to be tasteful and appropriate; though we confess our feeling is, that a certain *soberness* should distinguish the richness of the finest mansion in the country from that in town. Still, in a villa or mansion, where all the details are carefully elaborated, where there is no neglect of essentials in order to give effect to what first meets the eye, where everything is substantial and genuine, and not trick and tinsel,—there one expects to see more or less of the luxury of art in its best apartments.

But all this pleasure vanishes in the tawdry and tinsel *imitation* of costly and expensive furniture, to be found in cockney country houses. Instead of a befitting harmony through the whole house, one sees many minor comforts visibly sacrificed to

produce a little extra show in the parlor; mock "fashionable" furniture, which, instead of being really fine, has only the look of finery, usurps in the principal room the place of the becoming, unpretending and modest fittings that belong there; and one is constantly struck with the *effort* which the cottage is continually making to look like the town house, rather than to wear its own more appropriate and becoming modesty of expression.*

The pith of all that should be said on this subject, lies in a few words, viz., that *true taste lies in the union of the beautiful and the significant.* Hence, as a house in the country is quite distinct in character and uses, in many respects, from a house in town, it should always be built and furnished upon a widely different principle. It is far better, in a country house, to have an abundance of space, as many rooms as possible on a floor, the utmost convenience of arrangement, and a thorough realization of comfort throughout, than a couple of very fine apartments, loaded with showy furniture, "in the latest style," at the expense of the useful and convenient everywhere else.

And we may add to this, that the superior charm of significance or appropriateness is felt instantly by every one, when it is attained,—though *display* only imposes on vulgar minds. We have seen a cottage where the finest furniture was of oak in simple forms, where everything like display was unknown, where everything costly was eschewed, but where you felt, at a glance, that there was a prevailing taste and fitness, that gave a meaning to all, and brought all into harmony; the furniture with the house, the house with the grounds, and all with the life of its inmates. This cottage, we need scarcely say, struck all who entered it with a pleasure more real and enduring than that of any costly mansion in the land. The pleasure arose from the feeling that all was significant; that the cottage, its arrangement, its furniture, and its surroundings, were all in keeping with the country, with each other and with their uses; and that no cockneyisms, no imitations of city splendor, had violated the simplicity and modesty of the country.

There must with us be progress in all things; and an American cannot but be proud of the progress of taste in this country. But as a great portion of the improvements, newly made in the country, are made by citizens, and not unfrequently by citizens whose time has been so closely occupied with business, that they have had no opportunity to cultivate a taste for rural matters, it is not surprising that we should continually see transplanted, as unexceptionable things, the ideas in houses, furniture, and even in gardens, which have been familiar to them in cities.

As, however, it is an indisputable axiom, that there are laws of taste which belong to the country and country life, quite distinct from those which belong to town, the citizen always runs into cockneyisms when he neglects these laws. And what we would gladly insist upon, therefore, is that it is only what is appropriate and significant in the country, (or what is equally so in town and country,) that can be adopted, without insulting the natural grace and freedom of umbrageous trees and green lawns.

He who comes from a city, and wishes to build himself a country seat, would do well to *forget* all that he considers the

* We are glad to see evidences of a better taste, in the neat and pretty "cottage furniture," which is now made and sold by Henessey, of Boston, and various other dealers in New-York and Philadelphia. One can, by their aid, now furnish a cottage without being obliged to buy chairs and tables suitable only for a town house or villa.

standard of excellence in houses and furniture in town, (and which are, perhaps, really excellent there,) and make a pilgrimage of inspection to the best country houses, villas and cottages, with their grounds, before he lays a stone in his foundation walls, or marks a curve of his walks. If he does this, he will be certain to open his eyes to the fact, that, though there are good models in town, for town life, there are far better models in the country, for country life.

ON ROOT-GRAFTING AND GRAFTING GENERALLY.

BY H. E. HOOKER, ROCHESTER, N. Y.

Mr. Downing—As there seems to be some difference of opinion, among your correspondents, in regard to the propriety of root-grafting fruit trees, especially apples, and as the current of opinion, so far expressed, has been in favor of budded, or seedling (that is, not worked) trees, a few words in extenuation of the practice will, I think, be appropriate from one who is engaged in this business, which seems so obnoxious to some.

One of the first questions which meets us, is, whether any tree or plant, except a seedling, is admissible in the orchard, garden or fruit yard?

Now it seems to me that no sensible man will deny that one of the greatest benefits which are derived from the gardener's skill, is through multiplying individual plants, as varieties of the same class or species, by means of layers, cuttings, eyes, sprouts, and grafts or buds.

The practice of all except the most primitive cultivators, shows that this is undeniable; for no man objects to a plant or tree, of a kind which he wishes to obtain, because it is not raised from seed; and he has good reason, when he sees it perfect in all its parts, to expect it to be as long lived, and as useful, as the original parent which was derived from seed. No method of propagation can be injurious to the health or longevity of a tree, which produces the plant perfect in all its parts,—a fact which is abundantly proved by time and trial, as in the case of grapes, currants, willows, poplars, &c. &c. This fact also shows, that in regard to many plants and trees, there is no particular spot in the tree where *vitality* is stored up, unless it be in the bud itself. This is still further evident, in cases where we see fine perfect plants raised from bits of roots, as in raspberries; and even apple and pear trees may be produced in the same way.

The next question is as to the propriety of transferring one variety of a species to another stock of the same species, but of a different variety. This opens a wide field, and one which I confess I am quite unable to compass, and where abundant room remains for interesting experiment and investigation; but enough has been done to prove that varieties may be grafted or budded upon other varieties of the same or even a different species, without serious injury. Still, during these experiments, differences do appear, as every cultivator has observed; and even in the use of stocks of the same species, we find some individuals are improved, a greater number are injured, but in most cases the difference is scarcely perceptible between the grafted or budded tree and the original plant. It

is plain, however, that a stock which most nearly approaches the kind intended to be worked, in constitutional vigor and other characteristics, offers the best promise of ultimate success.

The only question, then, is what is the most proper mode of propagation?—and this I believe to vary with the subjects of the operation. In propagating the cherry, for instance, the customary way with good nurserymen, is to procure pits from thrifty Mazzard trees. These produce seedlings so uniform in their growth, and so well adapted to the best cultivated sorts, that very little difference will appear in trees or fruit, when budded as they commonly are, a few inches above the ground; but even these, I have raised equally fine by grafting in the root. Apples, however, are commonly raised from seed obtained at the cider presses. The fruit used there is generally small and crabbed. The stocks produced, consequently partake of the same nature; and when worked with some of the best free growing sorts, the stock and scion are evidently somewhat dissimilar in character, and not as likely to produce good trees and fine fruit, as if they were both alike in habit of growth and structure. In root-grafting, this difficulty is obviated; and therefore it must be the best method of propagation, if it has no other serious objections; and I know of none, where the operation is well performed.

My experience is, that seedling stocks of two, or at most three years' growth in the seed bed, should be used; they will be then from one-fourth to one-half an inch in diameter, and have from eight to twelve inches of good straight firm roots. This latter only should be used. It will make two good cuts, say four inches long. These pieces of root whip-grafted, (and the joint covered with wax or waxed cloth,) with scions of the same length, making eight inches, will penetrate the full depth of any ordinary soil, when only half an inch of the scion is left above the surface. Let these be put out upon good ground, not previously cropped with trees, at the proper time in the spring; and in three or four years, with good cultivation, they will have become fit for setting in orchards, and, upon examination, will be found almost without exception to have thrown out roots from the scion,—thus forming a tree upon its own roots; in other words, as perfect a tree as the original parent.

If we examine old trees, we find that the strongest roots are those which spring from the trunk, near the surface of the earth; these having a more horizontal direction, and continuing to find nourishment as they progress in the surface earth. Of course, then, the little that remains of a different, and perhaps dissimilar stock, in a root-grafted tree, exerts but a comparatively small influence upon its growth or fruit.

These views are corroborated by the testimony which orchards themselves bear, on every side of me. Are the apple trees less luxuriant and fruitful? Or is the fruit less beautiful, and highly flavored? Or do the trees give stronger evidence of premature decay in western New-York than in other sections of our country? I think not. The fruit speaks for itself in the market; and he who doubts the health of our orchards, may come and see for himself. Yet nearly all our fine trees have been root-grafted, and the practice still continues with the decided approval of almost all cultivators of fruit.

I have conversed with farmers who had portions of their orchard set with root-grafted, and other parts with natural fruit, or seedling trees, and have examined the trees, and found the difference in favor of

the root-grafted trees. They were as long lived, as healthy, as fruitful, and almost without exception *larger*, than the natural fruit trees of the same age.

There may be some slight objections to this method of cultivating trees, but they are not those which have been urged by your correspondents; and even these apply mainly to the abuse of the system. And until more satisfactory arguments than have yet been published, or than I am acquainted with, are produced, I must approve the judicious use of root-grafting.

Yours truly, H. E. Hooker.

Com. Nursery, Rochester, N. Y., Aug. 7, 1849.

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Remarks.—Many intelligent persons puzzle themselves and others by not rightly understanding the difference between theory and practice; and many such persons are the correspondents to whom Mr. Hooker alludes.

Theoretically, a man is never perfect; i. e., in sound and healthy physical condition, except in a savage state, where hunting and fishing, and the full use of his bodily powers makes him nearly so, as an animal; and, theoretically, a tree is never perfect except when it is raised from seed, on the spot where it is finally to grow, because every mutilation of root or branch somewhat shortens its life.

Practically, however, man is immensely improved, intellectually and morally, by passing out of the savage into the civilized state; and plants are no less improved by a like progress, brought about by cultivation. It is perfectly certain that both men and plants lose something of the original force of their vital powers by civilization and cultivation; but it is also perfectly certain that no sensible man will prefer to return to the savage state, any more than he would prefer the indulgence of his animal passions to his highest intellectual and moral enjoyments.

The same parallel holds good in the vegetable kingdom, viewed in a horticultural point of view. There is no question whatever that the most perfect wild trees, as well as the most perfect *wild men*, are produced directly from nature; but as we are almost as certain that we cannot produce the finest cultivated fruits from seed, as we are that we cannot look for the finest intellectual and moral natures among savage tribes, both civilization and cultivation are absolutely and equally necessary.

It is useless therefore to say, either that we shall not have schools, or that we shall not have grafting. The only point worth caring for, is that both means of improvement are rendered as perfect as possible; for the end of both is not merely, as many teachers and cultivators seem to suppose, to obtain *good fruits*, but to obtain them from a healthy organization.

Instead, therefore, of wasting time in talking about abandoning all kinds of grafting, and raising all fruit trees from seed,—which is, indeed, the merest moonshine,—it is the part of wisdom for all good cultivators to set about ascertaining what are the best modes of grafting and budding, what the best stocks, and what the most favorable conditions for maintaining the vital powers of the trees thus propagated.

Four-fifths of all the imprecations that have been bestowed upon grafting and budding, should have more properly been heaped upon those who practice these most beautiful and useful arts badly, by using diseased stocks, and taking grafts from stunted and decaying trees; or from branches of those trees, the vital powers of which had been enfeebled and worn out by over-

bearing. Until nurserymen will fully understand, that all grafts from any tree are not alike good, and, above all, that grafts from diseased trees are worse than worthless, it is plain enough that almost as much evil as good will result from grafting; but our nurserymen are, we trust, fast throwing aside all such ignorance, both of their business and their interest, and better cultivation must necessarily result from better information.

The best proof of this progress is the receipt of such articles as Mr. Hooker's Root-grafting, (which, as we know, is practiced to an immense extent every year in the nurseries of western New-York, where a single nurseryman works more than 100,000 apple trees alone in a season, in this way,) is, as he rightly esteems it, one of the most perfect modes of effecting a union between the scion and the stock yet invented. Ed.

HORTICULTURAL SUGGESTIONS AND MEMORANDA.

BY PROFESSOR TURNER, ILLINOIS COLLEGE.

A. J. Downing, Esq.—*Dear Sir:* After quite too long a delay, I proceed to redeem my promise to report progress for the season. My excuse for this delay may be found in a few words,—late spring, deep mud, wet weather, sick hands, and last, though not least, the twin brothers—California and cholera; the one a madness of the brain, the other of the bowels; and both epidemic, if not contagious. But to drop excuses and proceed to business; and first:

Cherries.—I well knew that peeling a ring around a cherry tree endangered its life, as our respected Massachusetts friend suggests, in your last number. On the very tree to which I alluded in my last article, in the course of my experiments I peeled a ring of bark off from a limb, about one inch and one-half through, for about one and one-half inches in length. I left this limb standing in this condition through the winter, and in spring it was perfectly dead, while all the other limbs which were *wholly peeled* are still alive and in fine condition. In a word, I have never yet known a tree *wholly* peeled, in this climate, to be injured, though I have known it to produce injury, in most cases when only partially done, from what I suppose to be a congestion of the sap about the part which is peeled,—producing too great an exposure at the point, both to fermentation from heat, and congelation or frost from cold. I have never, however, tried our friend Newton's mode of slitting; but while I fear it would not be found sufficiently effective in our soil and climate, I think the suggestion eminently timely and judicious for the more northern latitudes.

Pears.—The disease of the leaf of my pear trees, to which I alluded last season, still continues its ravages. I have noted it more carefully this year than ever before.

It begins to appear in the spring, even before the leaf opens. The folded leaflets, as soon as they first begin to peep into sight, are all covered with red carbuncles. As the leaf expands, these grow larger, and first change from their scarlet colour to pale yellow, skirted with a dingy pale green, and confined mostly to the central parts of the leaf. These blotches continued to manifest more and more of

the appearance of disease, until at last they turn perfectly dead and black, and fall out, leaving the rest of the leaf torn and jagged, but still apparently in tolerable health; though the whole foliage of the tree is not of so deep and pure a green as when no disease is present. The trees diseased last year are still more so this year, which leads me to fear for the results more than ever.

I have on my grounds, say some eight or ten hundred pear trees, old and young, and I cannot find a single tree not affected more or less, whether old or young. Those just beginning to fruit, appear the worst; while the seedlings of last season,—scions brought hundreds of miles, and even the sprouts that formed their buds in the bark, and came out below the scions after these were set,—all show the disease alike; the last perhaps more plainly than any of the branches from buds formed last fall.

I have noticed the beginning of the disease on some trees in other orchards this season, but think I am less likely to find it in all cases where the trees stand in a *hard blue grass sod*, which has not been touched for years, than in any other place. My own I shall in part put in that position, on trial, next season, since all other remedies which I have tried have done no good. For example, I have applied sulphate of iron to top and root, sulphur, iron-rust, scoriæ, bones, lime, ashes, dead carcasses, &c. &c., but to no affect. Plaster of Paris I have not been able to obtain. I have also tried both shade and sun, trimming and not trimming, seedling roots and no seedling roots; and if this is the disease which your correspondents term *the blight*, I confess I know nothing about it. It is different from that disease which I have understood to be called the blight, whether of *insect*, *sun*, or *frost;* and until it appeared, I supposed I had practically triumphed over those other forms of blight which evidently affect the sap or bark, or both, and soon kill the tree.

But with this, all my former theories, remedies, means and appliances are wholly at fault. But from the facts stated above, I must think it a constitutional disease, if not contagious, independent of insects, or heat, or cold, or even of formed buds; but affecting in the same way buds formed in summer and those brought hundreds of miles, and grafted on the stock; and still, if it continues to progress, it must inevitably destroy every tree I have, unless a tree can live without leaves. Cannot some of your wiser men in the east, help us out of this dilemma?

Bark-binding.—I ought to have said, in connection with my remarks on cherry trees, that I have a box elder [Ash-leaved maple] tree in my yard, six inches through, against which a post was set, to prevent driving the carriage so as to strike it. As the tree grew and the post leaned, they came in contact at the top of the post, for about four inches, so as to impede the flow of the sap downwards, which was not observed until the sap above the place of contact stagnated, and either fermented in the sun or froze, or both, and, as a consequence, the bark died and came off from the tree above the lesion, for a space four inches wide, and running up the tree the whole length of the trunk—six feet,—exhibiting in the spring the same appearance as the cherry tree often does when the bark bursts, and as the pear tree does, in case of that disease I have supposed to be sun-blight. This was on the west side of the tree. Now here is one of our hardiest forest trees, taken from the grove not 50 rods from where it now stands, ruined by two causes,—stopping the circulation be-

low, and exposing the trunk meantime to the hot sun, unprotected by shade; for if the trunk had been shaded, I must think the tree would not have been materially injured by the interruption of the circulation for so short a space below. The same principle applies in the partial peeling of hide-bound cherry trees, mentioned by Mr. NEWTON, in your last.

GOOSEBERRIES.—I have tried the plan of spading, manuring and applying *salted straw* or *hay* to my English gooseberries, which was suggested in the Horticulturist. Year before last I tried it for the first time. I had a fine crop that season, though never any before. The next year I omitted it; I had no gooseberries. This year I tried it again, and have had a fine crop.

QUINCES.—I salted my quince bushes, and manured them, this year, as you recommended. I have, for the first time, the pleasure of seeing fine fruit on them.

APRICOTS.—I threw an awning of coarse sheeting over my apricots early in spring before the buds started, and put straw about the roots, and saved my bloom from early frosts, and, of course, my fruit, for the first time. The awning was kept on until the fruit was fairly set, and frosts all over.

GRAPES.—Oh, FATHER BACCHUS, what shall I say of the poor grapes? They look dryer than SEMELE did after JUPITER appeared to her in his glory; and it would take more than one AUNT INO to nurse them into life again. Well, the rot, the rot; and then, there is two kinds of it,—the *brown wet rot*, and the *dry black rot*. Both come on most freely after sudden alternations of showers and hot suns; and both appear often on the same vine, and at the same time. The lowest branches usually rot first—the higher last, except that a side branch will sometimes escape, where the main stem is thrown far above, so as to take most of the sap from it.

The brown rot begins with a small whitish spot on the skin of the grape, which frequently exudes a particle of sap from its centre, and immediately progresses toward the stone, so as to involve and destroy the whole pulp in a short time.

The black rot begins with a black or dark spot on the skin, often bordered with a circle of reddish brown, and is quite dry in its appearance, and seems for a long time to be confined to the skin of the grape,—stopping its growth, and slowly extending over the surface, without implicating, at first, either the flesh or the stone. This former disease resembles a rapid multiplication of the tissues of the human subject; the latter is like a fatal erysipelas; but both are equally incurable and deadly. *Are they from the same cause?* Both of these forms of rot attack our best native grapes; but the Isabella more than the Catawba in this region. The young vines, say until four or five years old, generally escape unharmed. But after that age, the rot generally grows worse and worse on all sorts of common prairie soil, until the vine becomes useless three years out of four; that is, in all seasons except those which are remarkably cool and dry at the time the fruit is hardening its seeds. For I have never known a single year in which the vine here, even under the most careless management, did not set with an abundant crop of fruit. But after it is half or two-thirds grown, or when the shell of the stone or seed begins to concrete, then comes the fatal rot, in one form or both; and if the weather is warm and wet, the bright and cheering hopes of the season are all blasted in a single week.

In one case, this season, I found a very small *white maggot*, wholly enclosed in

the inside of the shell of the stone, and beginning to feed evidently on the meat of the stone. This maggot was probably put into the grape while near the bloom, as the pea bug is put into the pea. It was in a grape affected with the brown or stone rot. But on further examination I found no more, and supposed this a solitary case, and not the cause of the rot; though I must confess it has aroused my suspicions, and I mention it to induce thorough microscopic examination.

That the rot is not occasioned by the puncture of any insect at the time it occurs, may be proved in this way: Puncture any number of grapes with a pin, or slit them with a knife, and it will not harm them. Indeed, those I punctured, in my experiments this year, escaped the rot until all the others on the same branch, and even on the same bunch, had perished. Such in general is the disease.

As to remedies, I have applied ashes, sulphur, lime, iron, bone-dust, sulphate of iron, oxide of iron, manure of all sorts, &c. &c., with various modes of training and pruning, to no effect.

Paving the ground with brick 18 inches below the surface, and filling in plentifully with brickbats, limestone, old bones, old shoes, chip manure, &c., is undoubtedly the best remedy that has yet been found; but it is quite expensive. Paving the surface, or coping it with boards, to shut off the superabundant rain has been recommended, but is not a specific. Suffering the vines to run at large in high trees is not always effectual, if ever, when the vine becomes old. Two facts have have been reported to me during the past season worthy of record, or at least of notice.

One gentleman in Bond county, Illinois, allows his grape-vines to grow at random, in a *stiff blue grass sod*, on dry ground, and affirms that his grapes never rot, while all his neighbor's do rot, and still he has, he says, fine crops.

Another gentleman, in the heart of the city of St. Louis, has old Catawba and Isabella vines, trained on an arbor frame 16 feet high. He gives them a severe spring pruning, but *no summer pruning*, and gathers bushels every year without fail, while his neighbors, on a similar clay soil, a little out of the city, find that theirs all rot annually. I have thought that the immense amount of coal burned in the city, might affect his grapes. *Do grapes rot in Pittsburgh*, or anywhere near it? Does any one know? For if so, no smoke this side of the bottomless pit will save them.

However, I will try the high training, the coal smoke, and the blue grass sod, and the gypsum, too, if any gentleman will send me a barrel—(for the west abhors imported manure worse than nature does a vacuum,) each under distinct vines, next year, and report accordingly.

The philosophy of the blue grass sod, if true, is this: Absorption of wet and exclusion of heat, while the rich soil here still gives food enough to the vine. But I cannot believe in this treatment, though it has doubtless succeeded in the single case alluded to; and still, pears do far better in such a sward, in our soil, than anywhere else, beyond all doubt.

I have thus indicated all which I thought would tend to set your intelligent readers to thinking, experimenting, and writing on the subject,—hoping that something may come to the relief of the prairies; for it is now quite certain, I think, that neither the Ohio vine culture, with all its beauty and science, nor indeed any other known culture, can be of any practical use to *us*, simply on account of this fatal rot, while all else does admirably, even without care or

culture. And if this rot could be stopped or cured, we could grow grapes spontaneously, to any considerable extent; and I fancy I see your readers look very queer, in view of this said "IF,"—"If the sky falls," &c. But "try again," should be the motto of the pomologist.

BOOKS, SEEDS, CUTTINGS, &c.—Your package of books, seeds and cuttings, I considered invaluable in the west, though they were so long delayed by the state of the spring transportation that the latter all *perished*, though sent through by express.

The *Bassano beets* are splendid—so early and so sweet. Why, the good housewife can sow the seed when she feeds the chickens in the morning, and have fine greens and beets for dinner, if not the same day, at least in a very few days after.

The *Prince Albert peas* were ripe in five weeks from planting.

The *English Prize cucumbers* in our soil are long enough for fishpoles, fine growers, and of good flavor.

The *Ispahan melon* grew finely; but unfortunately, all the vines were destroyed by the maggot but one, and that was so injured that I fear I shall not save the seed.

The *Cedars of Lebanon* came up, and still grow, but I fear the climate will not suit them.

None of the *Arbor Vitæ* seed came, and few of the Junipers, as yet.

I planted all my vine seeds in a frame, as recommended in the Horticulturist, on blue grass sod, covered with cotton cloth, without oiling the latter; and I think it saved me one-half of my usual labor, without the loss of a single vine from bugs through the season. This fact alone is worth more to me and my neighbors than the Horticulturist will cost for years.

My watermelons, planted where tomatoes had grown two seasons before, are of twice the size and vigor of growth of those planted in the same way, at the same time, and on the same soil, side by side. Is this a general result? I have just eaten specimens of pears, now fully ripe, (July 20,) presented me by ELIHU WOLCOTT, Esq., and described by him last year in the Prairie Farmer. The season is two or three weeks later than common; but they are now, indeed, a fine ripe pear, of good flavor for the season. More anon. Respectfully yours, J. B. TURNER.

Illinois College, July 31, 1849.

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[Thanks, for the above interesting suggestions; we trust they will call out still more light on the very interesting topics touched upon.

The *rot* in Catawba and Isabella grapes, is very little known at the east; and indeed, until last season, never appeared to any serious extent. This year, we believe, there is much less of it than last season.

We hope careful investigation will lead to some accurate knowledge of the nature of the disease. From some experiments of our own, we are inclined to believe that covering the surface of the soil over the roots with two or three inches of straw or litter, to preserve the ground in an uniform condition of moisture and heat, and *never pruning the vines at all in summer*, (depending solely on severe autumn or winter pruning,) will greatly lessen, and, perhaps, entirely remove this disease. ED.]

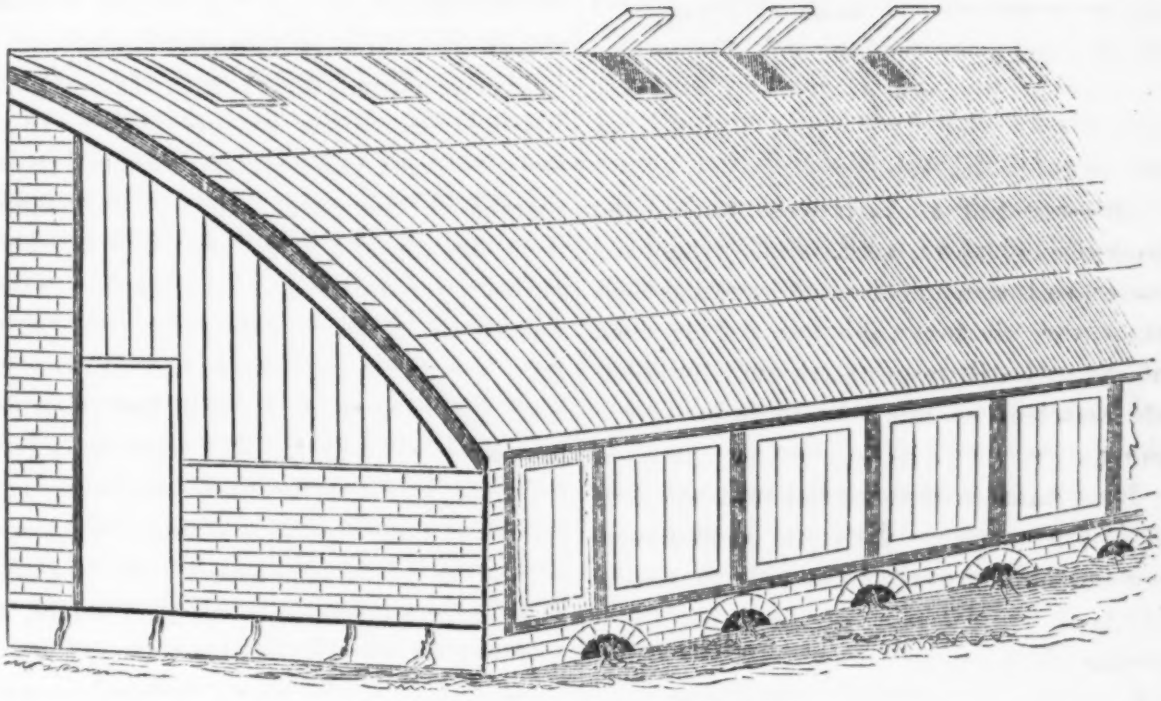

Fig. 73.—*A Portion of Mr. Resorr's Vinery.*

DESCRIPTION OF AN IRON ROOFED VINERY.

BY WM. RESORR, CINCINNATI, OHIO.

Dear Sir—I enclose to you a rough sketch of a vinery which I had built last year, Fig. 73.

Being in the foundry business, I concluded to make the rafters of iron; and experiencing the difficulty of finding any plan or hint to *work* from, I concluded to send you a description, so that others, inclined to build a *first rate* house, would not commence wholly in the dark.

The length of this vinery is 89 feet; height of back wall, 13 feet; height of front, 4 feet 8 inches.

The roof is curvilinear, and the rafters 17 feet long,—curving one foot. On the back wall (brick) a plate, 4 to 6 inches thick, and wide enough, and bevelled out, so as to turn the water off; the gutter stick in front answering for the plate, and also having the upright pieces framed into it, so that the sashes are hung on the under side. The form of the rafters is shown in Fig. 74. In Fig. 75, is shown a transverse

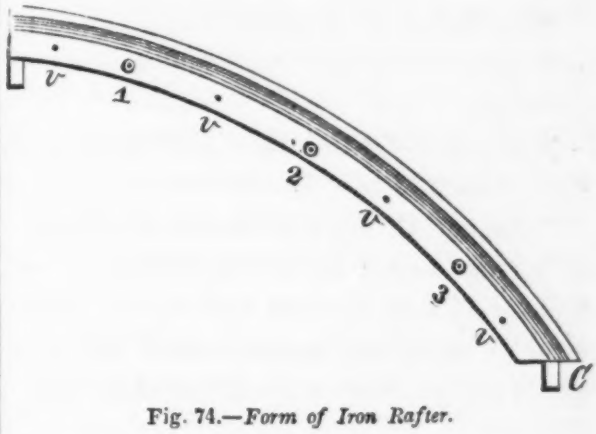

Fig. 74.—*Form of Iron Rafter.*

section of the rafter of the exact size—two inches deep. In this figure, A is the top of the rafter, B the gutter or groove for the

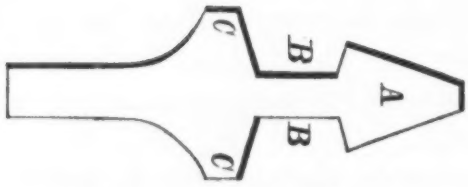

Fig. 75.—*Cross Section of Rafter.*

glass—one-half an inch wide, and C the ledge the glass rests on, which is a little wider, so that when the rafters are in their place, the glass can be dropped in from above, and will not drop through. There are small stops cast on the rafter inside the gutter, (Fig. 76, *a*,) for the glass to lodge against, and so placed that the glass must lap a certain distance, as the stops are put on for every light of glass,—and

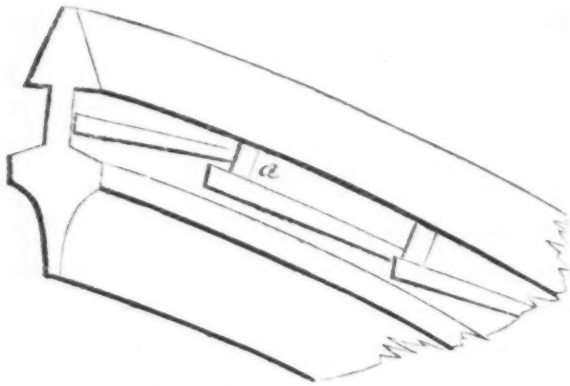

Fig. 76.—*Portion of the Rafter Glazed.*

saving the time and trouble of using tin hooks, as well as the appearance.

I also had my last rafters thickened at the places where the connecting rod goes through, by putting on the pattern a small piece around the hole; so that by countersinking the pattern, every hole in the rafters will be on a line when drilled for the rod. The pins at each end of the rafters marked C, (Fig. 74,) are to be perpendicular when the rafter is at the proper angle, and are $1\frac{1}{4}$ inches long, and $\frac{3}{4}$ of an inch in diameter. When the plates are in their places, and fastened, you begin at one end, and with a pair of compasses you mark the proper width for the glass, and bore a hole, that the pins will fit, and drop the rafters in their place. After they are all put up, (being previously drilled at the shop, both for the rods to support them, and for the wires to support the vines,) I run a rod, a quarter of an inch in diameter, say 20 or 30 feet, through the holes, and also through the *inside* barge board, and screw a nut on the end. I put three rods (1, 2, 3, Fig. 74,) in the 14 feet rafter. I then took small pieces of wood half an inch square, and long enough to keep the rafters wide enough apart, and put one in each space, and under each rod the entire length,—having a nut one inch thick at the other end of the rod, (if your house is longer than the length mentioned 20 or 30 feet.) The object is to continue the rod in a straight line through; as when the pieces of wood are all in, you place the long nut far enough on the rod to admit the next length to screw into it, and then screw up the nut between the barge boards until everything is in its place, when it is ready for the glass. The better way of painting, is to *prime* the rafters before they are put up, and *second coat* before glazing. You leave the small sticks in their place until the putty is dry, and then take them out and finish painting. Instead of sliding sashes on top, I have near the top, in the back wall, a window $3\frac{1}{2}$ feet long by 2 feet high, every 4 feet, and closed with a tight shut, and hung at the bottom; so that having a cord fastened in the center of the shut, near the top, and drawn through a pulley, fastened below, leaving slack cord enough to open the window the desired width. You push them open with a stick from the inside. I have also, (as you will see by the sketch,) windows on top; but the others are all sufficient. To support the vines, you prepare three or four rafters

together, say at 4 feet apart, (the distance of the vines apart,) by drilling near the lower edge, and equi-distant between each rod, holes one-eighth of an inch, (marked V, on Fig. 74,) to pass the wires through; and when everything is ready, you get a piece of iron or "stirrup," I call it, that will hang between the two outside rafters, and as low down as required, with a hole in each end; you run a small rod through each rafter, and through the stirrup, and turn down the ends of the rod—it is secure. At the lower side are holes in the stirrup, under each rafter, so that you fasten the wire in the front of the house, and run it through each stirrup to the top. The whole is cheap and simple, and answers the purpose well. My new rafters weigh 24 lbs. to 14 feet in length. My old ones, in the vinery, 44 lbs. to 17 feet.

Those wishing to build a good substantial house can do it, and make the roof of iron, as cheaply as of wood; the other parts costing the same.

It is handsome in appearance, and lighter for everything inside. I have used in the vinery 7 by 9 double strength glass, and have sent to England for the new [sheet] glass, mentioned in the Gardeners' Chronicle, for my green-house.

You will see by the drawing that I have planted my vines under arches in the front wall. The opening extends two feet under ground, and the roots are intended to run in the border outside, but also extend inside if inclined.

I have, at present, a peach trellis running through the centre of the house, similar to those at Mr. Cushing's, near Boston; and vines and a few trees on the back wall, in order to try how they will succeed. So far, they promise very well. Vine-growers here, who are experienced cultivators, say they could not do better. And besides my trees, I shall probably have, this season, 100 bunches of grapes to begin with.

I forgot to mention, that in casting the rafters there will be a little difference in the length; but it can be relieved at the upper end, in the wood, so as to make them exactly uniform on the top. If any gentleman wishes any additional directions, I shall be happy to give them; and if they wish it, I can send a small piece of the rafter, so that they can understand it better than by my description.

If a span roof is desired, a double ridge pole is all that is necessary, with a space wide enough for ventilation, similar to our upper steamboat cabins, and I believe, also, the conservatory at Kew.

I do not know whether you or any one else can understand what I have written; but it is the best I can do.

I have in the vinery 36 vines, 2 plums, 4 peaches, 2 figs, 1 apricot, and 1 nectarine.

I also enclose a sketch of green-house,—showing the position it occupies near the house, and opening on the verandah. Should you wish the plan of its construction, I will send it; as it is different from the vinery, in having sliding sashes behind, on top, made of wood. I will remark, that I shall heat with a "Culver's patent hot-air furnace," arranged in the "Polmaise" manner; having tried one effectually last winter. It is cheaper than water pipes, less trouble to put up, takes less fuel, and in damp weather you can put in as much or little, with the register, as you want. Yours respectfully, Wm. Resorr.

Cincinnati, July 12, 1849.

A WORD OR TWO ABOUT RURAL CHURCHES.

(SEE FRONTISPIECE—DR. MUHLENBERG'S CHURCH, N. Y.)

Our frontispiece, this month, is a view of a very pleasing and tasteful church, designed by Mr. Upjohn, and built in New-York, by Dr. Muhlenberg's congregation.

We give this view, with the hope of leading some of our readers, who have to do with the building of churches in the country, to reflect on the superior beauty and fitness of simple forms of rural pointed architecture, over all other modes for a Christian church in the country.

The most conspicuous object in almost all village landscapes is the church; and we regret to say that the deepest sigh, drawn by the man of taste in the middle and eastern states, is over the sad architectural monstrosities built, in so many country villages, as houses of worship. Lean and meagre wooden structures, filled with windows, painted so white that all is glare within and without, and surmounted by a tower or steeple that defies all rules and precedents, both in proportion and decoration, the only satisfaction one has in looking at them is the feeling that, from the frailness of their materials, they cannot last many generations.

The Gothic or pointed style of architecture is so associated with our religion, and, in its aspiring lines, is so symbolic and suggestive of its faith and hope, that its appropriateness for church architecture is largely felt and acknowledged.

What we especially commend to attention, in Dr. Muhlenberg's church, is the modesty and simplicity of the structure. It is the common error of uneducated builders to suppose that no architecture is effective or agreeable unless it is elaborate and highly ornamental. Hence, we frequently see, in the country, a good deal of means expended upon ornamental work, copied from some large building, like Trinity Church, where it is real and excellent, and introduced in some part of a rural church where it is flimsy, and wholly out of keeping with all the rest of the building.

Those points which should be aimed at in a country church are, mainly, that it should have a truthful, church-like expression; that it should never be mistaken for any other public building, without; and that it should always inspire devotional feeling, within. Next to this, a rural church, and more especially when placed essentially in the country, should always have a simple and modest character, in keeping with the rural expression of the quiet nature about it, rather than with the highly artificial objects which surround the church in the town or city.

An admirable and beautiful effect is always produced in churches in the style of our frontispiece, by leaving the whole interior open to the roof, finishing the timber work of the roof (which is either oak, or stained to resemble it,) so as to become characteristic and ornamental. The high roof lines, all tending upwards, give the interior of even a small church, constructed in this way, a lofty, dim and solemn aspect, far more in keeping with devotional feelings and purposes than the plastered ceiling and white walls of most of our country churches.

As regards expense, in all districts where stone or brick is abundant, a rural church may be erected in this simple pointed style

more cheaply than in any other. Rough or rubble stone wall, covered externally with ivy, or the Virginia creeper, are far more pleasing than the smoothest and richest carpeting; and a church built in this real and solid manner will stand for ages, and, with the lapse of time, grow constantly dearer to all who enter it, while wooden churches only grow old to grow more rickety, and are too frail and temporary to inspire respect by their permanence, or veneration by their antiquity.

THE HISTORY OF THE GROWTH OF A TREE.

BY PROFESSOR LINDLEY.

[We extract the following interesting physiological description of the growth of a tree, from the new edition of Lindley's *Introduction to Botany*,—a work of inestimable value to the student in this department of science. It will be difficult for such of our readers as are interested in the nature of vital action, and the laws of vegetable growth, to obtain a more definite idea of their general operation than by carefully perusing this extract. Ed.]

I. If we place a seed (that of an apple, for instance,) in earth at the temperature of 32° Fahr., it will remain inactive till it finally decays. But if it is placed in moist earth some degrees above 32°, and screened from the action of light, its integument gradually imbibes moisture and swells; the tissue is softened, and acquires the capability of stretching; the water is decomposed, and a part of its oxygen, combining with the carbon of the seed, forms carbonic acid, which is expelled; nutritious food for the young parts is prepared by the conversion of starch into sugar; and the vital action of the embryo commences. It lengthens downwards by the radicle, and upwards by the cotyledons; the former penetrating the soil, the latter elevating themselves above it, acquiring a green colour by the decomposition of the carbonic acid they absorb from the earth and atmosphere, and unfolding in the form of two opposite roundish leaves. This is the first stage of vegetation; the young plant consists of little more than cellular tissue; only an imperfect development of vascular and fibrous tissue being discoverable, in the form of a sort of cylinder, lying just in the centre. The part within the cylinder, at its upper end, is now the pith, without it the bark; while the cylinder itself is the preparation for the medullary sheath, and consists of vertical tubes passing through and separated by cellular tissue.

The young root is now lengthened at its point, and absorbing from the earth its nutriment, which passes up to the summit of the plant by the cellular substance, and is, in part, impelled into the cotyledons, where it is aërated and evaporated, but chiefly urged upwards against the growing point or plumule.

II. Forced onwards by the current of sap, which is continually impelled upwards from the root, the plumule next ascends in the form of a little twig, at the same time sending downwards, in the centre of the radicle, the earliest portion of wood that is deposited, and compelling the root to emit little ramifications; and simultaneously the process of lignification is going on in all the tissue, by the deposit of a peculiar secretion in layers within the cells and tubes.

Previously to the elongation of the plumule, its point has acquired the rudimentary state of a leaf: this latter continues to develope as the plumule elongates, until, when the first internode of the latter ceases to lengthen, the leaf has actually arrived at its complete formation. When fully grown it repeats in a much more perfect manner the functions previously performed by the cotyledons: it aërates the sap that it receives, and returns the superfluous por-

tion of it downwards through the bark to the root; tubular tissue at the same time appears between the medullary sheath and the bark, thus forming the first ligneous stratum, a part of which is incorporated with the bark, the remainder forming wood.

During these operations, while the plumule is ascending, its leaf forming and acting, and the woody matter created by it descending, the cellular tissue of the stem is forming, and expanding horizontally, to make room for the new matter forced into it; so that development is going on simultaneously both in a horizontal and perpendicular direction. This process may not inaptly be compared to that of weaving, the warp being the perpendicular, and the weft the horizontal, formation. In order to enable the leaf to perform its functions of aëration completely, it is traversed by veins originating in the medullary sheath, and has delicate pores (*stomates*,) which communicate with a highly complex pneumatic system extending to almost every part of the plant.

Simultaneously with the appearance of woody matter, the emission of young roots, and their increase by addition to the cellular substance of their points, take place. They thus are made to bear something like a definite proportion to the leaves they have to support, and with which they must of necessity be in direct communication.

After the production of its first leaf by the plumule, others successively appear in a spiral direction around the axis at its growing point, all constructed alike, connected with the stem or axis in the same manner, and performing precisely the same functions as have been just described. At last the axis ceases to lengthen; the old leaves gradually fall off; the new leaves, instead of expanding after their formation, retain their rudimentary condition, harden, and fold over one another, so as to be a protection to the delicate point of growth; or, in other words, become the scales of a bud. We have now a shoot with a woody axis, and a distinct pith and bark; and of a more or less conical figure. At the axil of every leaf a new growing point had been generated during the growth of the axis; so that the shoot, when deprived of its leaves, is covered from end to end with little, symmetrically arranged, projecting bodies, which are the buds.

The cause of the figure of the perfect shoot being conical is, that, as the wood originates in the base of the leaves, the lower end of the shoot, which has the greatest number of strata, because it has the greatest number of leaves above it, will be the thickest; and the upper end, which has had the fewest leaves to distend it by their deposit, will have the least diameter. Thus, that part of the stem which has two leaves above it will have wood formed by two successive deposits; that which has nine leaves above it will have wood formed by nine successive deposits; and so on: while the growing point, as it can have no deposit of matter from above, will have no wood, the extremity being merely covered by the rudiments of leaves hereafter to be developed.

If at this time a cross section be examined, it will be found that the interior is no longer imperfectly divided into two portions, namely, pith and skin, as it was when first examined in the same way, but that it has distinctly two internal, perfect concentric lines, the outer indicating a separation of the bark from the wood: and the inner, a separation of the wood from the pith: the latter, too, which in the first observation was fleshy, and saturated with humidity, is become distinctly cellular, and altogether or nearly dry.

III. With the spring of the second year, and the return of warm weather, vegetation recommences.

The uppermost, and perhaps some other, buds, which were formed the previous year, gradually unfold, and pump up sap from the stock remaining in store about them; the place of the sap so removed is instantly supplied by that which is next it; an impulse is thus given to the fluids from the summit to the roots; fresh extension and fresh fibrils are given to the roots; new sap is absorbed from the earth, and sent upwards through the wood of last year; and the phenomenon called the flow of the sap is fully completed, to continue with greater or less velocity till the return of winter. The growing point lengthens upwards, forming leaves and buds in the same way as the parent shoot: a horizontal

increase of the whole of the cellular system of the stem takes place, and each bud sends down organisable matter within the bark and above the wood of the shoot from which it sprang: thus forming on the one hand a new layer of wood, and on the other a fresh deposit of liber.

In order to facilitate this last operation, the old bark and wood are separated in the spring by the exudation from both of them of the glutinous slimy substance called cambium; which appears to be expressly intended, in the first instance, to facilitate the development of the subcortical tubular tissue; and, in the second place, to assist in generating the cellular tissue by which the horizontal dilatation of the axis is caused, and which maintains a communication between the bark and the centre of the stem. This communication has, by the second year, become sufficiently developed to be readily discovered, and is effected by the medullary rays spoken of in the last book. It will be remembered that there was a time when that which is now bark constituted a homogeneous body with the pith; and that it was after the leaves began to come into action that the separation which now exists between the bark and pith took place. At the time when the latter were indissolubly united they both consisted of cellular tissue, with a few spiral vessels upon the line indicative of future separation. When a deposit of wood was formed from above between them they were not wholly divided the one from the other, but the deposit was effected in such a way as to leave a communication by means of cellular tissue between the bark and the pith; and, as this formation, or medullary ray, is at all times coetaneous with that of the wood, the communication so effected between the pith and bark is quite as perfect at the end of any number of years as it was at the beginning of the first; and so it continues to the end of the growth of the plant.

The sap which is drawn from the earth into circulation by the unfolding leaves is exposed, as in the previous year, to the effect of air and light; is then returned through the petiole to the stem, and sent downwards through the bark, to be from it either conveyed to the root, or distributed horizontally by the medullary rays to the centre of the stem.

At the end of the year the same phenomena occur as took place the first season: wood is gradually deposited by slower degrees, whence the last portion is denser than the first, and gives rise to the appearance called the annual zones: the new shoot or shoots are prepared for winter, and are again elongated cones, and the original stem has acquired an increase in diameter proportioned to the quantity of new shoots which it produced, new shoots being to it now, what young leaves were to it before.

IV. The third year all that took place the year before is repeated; more roots appear; sap is again absorbed by the unfolding leaves; and its loss is made good by new fluids introduced by the roots and transmitted through the alburnum or wood of the year before; new wood and liber are formed from matter sent downwards by the buds; cambium is exuded; the horizontal development of cellular tissue is repeated, but more extensively; wood towards the end of the year is formed more slowly, and has a more compact character; and another ring appears indicative of this years' increase.

In precisely the same manner as in the second and third years of its existence will the plant continue to vegetate, till the period of its decay, each successive year being a repetition of the phenomena of that which preceded it.

V. After a certain number of years the tree arrives at the age of puberty; the period at which this occurs is very uncertain, depending in some measure upon adventitious circumstances, but more upon the idiosyncrasy, or peculiar constitution, of the individual. About the time when this alteration of habit is induced, by the influence of which the sap or blood of the plant is to be partially diverted from its former courses into channels in which its force is to be applied to the production of new individuals rather than to the extension of itself; about this time it will be remarked that certain of the young branches do not lengthen, as had been heretofore the wont of others, but assume a short stunted appearance, probably not growing two inches in the time which had been previously suf-

ficient to produce twenty inches of increase. Of these little stunted branches, called *spurs*, the terminal bud acquires a swollen appearance, and at length, instead of giving birth to a new shoot, produces from its bosom a cluster of twigs in the form of pedicels, each terminated by a bud, the leaves of which are modified for the purposes of reproduction, grow firmly to each other, assume peculiar forms and colours, and form a *flower*, which had been enwrapped and protected from injury during the previous winter by several layers of imperfect leaves, now brought forth as bracts. Sap is impelled into the calyx through the pedicel by gentle degrees, is taken up by it, and exposed by the surface of its tube and segments to air and light; but, having very imperfect means of returning, all that cannot be consumed by the calyx is forced onwards into the circulation of the petals, stamens, and pistil. The petals unfold themselves of a dazzling white tinged with pink, and expose the stamens; at the same time the disc changes into a saccharine substance, which is supposed to nourish the stamens and pistil, and give them energy to perform their functions.

At a fitting time, the stigmatic surface of the pistil being ready to receive the pollen, the latter is cast upon it from the anthers, which have remained near for that particular purpose. When the pollen touches the stigma, the grains adhere by means of its viscid surface, emitting a delicate membranous tube, which pierces into the stigmatic tissue, lengthens there, and conveys the matter contained in the pollen towards the ovules, which the tube finally enters by means of their foramina.

This has no sooner occurred than the petals and stamens fade and fall away, their ephemeral but important functions being accomplished. The sap which is afterwards impelled through the peduncle can only be disposed of to the calyx and ovary, where it lodges: these two swell and form a young fruit, which continues to grow as long as any new matter of growth is supplied from the parent plant. At this time the surface of the fruit performs the functions of leaves in exposing the juice to light and air; at a subsequent period it ceases to decompose carbonic acid, gains oxygen, loses its green colour, assumes the rich ruddy glow of maturity; and the peduncle, no longer a passage for fluids, dries up and becomes unequal to supporting the fruit, which at last falls to the earth. Here, if not destroyed by animals, it lies and decays: in the succeeding spring its seeds are stimulated into life, strike root in the mass of decayed matter which surrounds them, and spring forth as new plants to undergo all the vicissitudes of their parent.

Such are the progressive phenomena in the vegetation, not only of the apple, but of all trees which are natives of northern climates, and of a large part of the herbage of the same countries, modified, of course, by peculiarities of structure and constitution; as in annual and herbaceous plants, and in those the leaves of which are opposite and not alternate: but all the more essential circumstances of their growth are the same as those of the apple tree.

If we reflect upon these phenomena, our minds can scarcely fail to be deeply impressed with admiration at the perfect simplicity, and, at the same time, faultless skill, with which all the machinery is contrived upon which vegetable life depends. A few forms of tissue, interwoven horizontally and perpendicularly, constitute a stem; the development, by the first shoot that the seed produces, of buds which grow upon the same plan as the first shoot itself, and a constant repetition of the same formation, cause an increase in the length and breadth of the plant; an expansion of the bark into a leaf, within which ramify veins proceeding from the seat of nutritive matter in the new shoot, with a provision of air-passages in its substance, and of pores on its surface, enables the crude fluid sent from the root to be elaborated and digested until it becomes the peculiar secretion of the species; the contraction of a branch and its leaves forms a flower; the disintegration of the internal tissue of a petal forms pollen; the folding inwards of a leaf is sufficient to constitute a pistil; and, finally, the gorging of the pistil with fluid which it cannot part with causes the production of a fruit.

Fig. 77.—Plant of Torenia, in the collection of J. Dundas, Esq., Philadelphia.

CULTURE OF TORENIA ASIATICA.

BY R. SCOTT, PHILADELPHIA.

Sir—Having introduced this plant to the notice of your readers, in a previous number of the Horticulturist, it may be interesting to some of them to give a few more additional hints on its cultivation, and what size it can be grown under good management, as it is likely to become a universal favorite with all lovers of Flora, both from its profuse, rich mottled, dark blue, and violet flowers, and its rapidity of growth.

The treatment which I shall notice more particularly, is that practiced by Mr. Bisset, (gardener to J. Dundas, Esq.,) one of the most successful, and best practical gardeners in this neighborhood. He procured his plant last February, then about four inches high, from Mr. Buist, nurseryman, who introduced it into this country last fall.

About the beginning of March, from a three inch pot, he turned it into a *sieve*, about sixteen inches in diameter by five deep, in soil one-half rich turfy loam, the other equal portions of peat and leaf mould. After fixing it in the sieve, he hung it up in a hot-house,—keeping it moist by frequent syringing, and topping at every second joint, to make it bushy.

About the end of April he removed it into a Camellia-house, where it now remains. It is trained horizontally,—the side branches allowed to hang down all

round. *It now measures ten feet in diameter*, presenting in all its parts a perfect mass of flowers and foliage,—being the finest specimen I have ever witnessed of plant cultivation.

The principal points to be attended to, in growing it to perfection, are to give it plenty of moisture by frequent syringing, and to stop the young shoots till it has acquired the desired form, when it may be allowed to ramble at pleasure. It is also excellently adapted for planting in vases, or placing round a fountain, always selecting for it situations where it will be shaded from the mid-day sun. We have planted it out here, in the border, where it is fully exposed; but the leaves are turning brown, and it looks altogether as if out of its latitude, and showing distinctly that it needs more shade and moisture. It is easily struck from cuttings, rooting at every joint like a Verbena. R. Scott.

SOMETHING ABOUT THE FRUIT CONVENTIONS.

BY AN OLD DIGGER.

I am, as you know, too much of an "old digger," to attend political meetings, agricultural fairs, or even fruit conventions. I am not only a little stiff in my joints, but it makes me nervous and irritable to see mere spouters and stump-speechifyers having most of the talk to themselves in such places, while the honest, sensible men, who have something to say, sit with their mouths closed.

However, I am fond of fruit; and as it is plain that we are to be a great fruit country, and that orchards, good apples, pears and peaches, are to be every landholder's possession, who cares enough for them to plant the trees, I look with a little more interest than common on these fruit conventions.

There is no doubt at all that a great deal of good will grow out of annual meetings of all the most experienced fruit-growers in the country. There is a great deal of knowledge among practical men, which never gets into the books; and many a rough hand, who writes his own name as if he were jumping a bog meadow, has picked up certain bits of experience in his life time that are worth, if you can get it out of him by talking, a good many more chapters than are to be found in many current books on the same subject. It is quite natural that when such men get together they should set each other agoing, if not by set speeches, at any rate by a chat in the corner; and I have no doubt that as much good is done in this sort of familiar intercourse among brother cultivators as in all others.

But when people go to a national or general convention, they must not take crab apples and choke pears in their pockets. I mean, in plain English, that they must not go crammed full of sectional feelings and local jealousies. It is very proper and very praiseworthy for me to be fond of my own horses and dogs, my own cornfields and meadows; but it will not do for me to imagine them better than any body else's, and tell my neighbors so to their faces. All sorts of social intercourse, societies, associations and communities, are based upon a spirit of *compromise;* that is, every man gives up something of his own pride and selfishness, in order that

the general good may be the gainer by it.

I "*dig*" into this subject a little, because I see the absence of this spirit of compromise appears to have retarded a little the onward march of the fruit-growing interest in the convention. I say *appears*, for I do'nt know that this is really the fact; for I am told that the conventions, both at Buffalo and New-York, were both successful and useful things; but some of the journals, and especially the agricultural papers, have fussed and fumbled over the meeting of these conventions, each giving a local colouring to the matter, till they have almost made it appear that harmony is impossible, when, in fact, there is not the least cause for discord.

According to the papers, western fruit-growers can't meet with eastern fruit-growers, and eastern knowledge and experience is worth nothing in the west. Softly, my friend. This may be all very well for editors, who wish to rally local parties and patronage round their own presses, but it is a *blight-wind* to your interests, depend upon it. Exactly what you want in convention, is to bring all sorts of different experiences together,—the Boston man, who coaxes his half dozen Bartletts in his back yard with guano, till he makes prize specimens, and the Ohio man, who gathers his apples from orchards that cover half a township, and thinks he is a scientific cultivator. It is exactly by getting all these growers together in convention, and comparing notes, and sifting opinions, that you are to get at the real kernel of the matter; for there *is* a kernel to every nut, as well as a husk. Those who sit down amicably and crack the nut are very likely to get at the kernel. Those who wrangle and quarrel are very likely to get only the husk.

Local patriotism is a good thing. I might call it the foundation stone of the national edifice; for it do'nt need any argument to prove that if a man do'nt love his own family, neighborhood and state, he wont love anything rightly. But an edifice is not all foundation; and unless the stones at the bottom of the wall are contented that there should also be stones at the top, it is easy to see there can be no regular house. I have been a little amused with this bubbling up of local patriotism in various articles in your journal, intended to be merely descriptive of the productions, and the fertility of certain sections of our common country. A writer in Vermont is certain that no part of America can beat the shores of Lake Champlain for apples; another, in Illinois, is equally sure there is no part of the Union equal to his for the same fruit. One pomologist, at Buffalo, feels confident that, all things considered, Buffalo is about the best soil and climate in the Union for all kinds of fruit; while you, in the valley of the Hudson, claim to raise the best of everything, from Dennis-ton's famous Albany plums to Pell's still more famous Newtown Pippins.

Very little hurt will come out of this pleasantry in the right place. It is only chuckling a little over the good things Providence has sent us. But we must not grow too serious about it, and declare that we of the west can beat the east in orchards, and do'nt care to be dependant on her; or we of the east have got all the science, and can teach all the rest of the nation. There is something to learn all round; and if we have learned all that is to be learned at home, and in our own heaven-blest neighborhood, state or county, why then there is a great deal more to be learned by watching sharply what cultivation and cultivators have done all over

the country. But this kind of learning can only be got at by a little forbearance and courtesy towards others, and not talking too large about our own breed of cattle.

As some of the noisiest of this species of tin-trumpet orators have probably gone off to California since last season, I suppose it will be found easy for our future fruit conventions to unite in some plan of comfortable, harmonious action for the future. I am the more confident that this will be the case, from the spirit of good will which I see maintained in your journal,—taking the ground that a genuine fraternity of interests is the only means of bringing out all the information in the country.

Certainly it is a pleasant thought, that all the leading fruit-growers in the country can meet and fraternise once a year,—bringing from all parts of the Union the stores of their experience, and the fruits of their culture, and raising up a pyramid of knowledge for the general good. It is so pleasant a thought that I will leave it for your readers to revolve in their minds, and see what good may come out of it.

Yours, &c., AN OLD DIGGER.

PAVING A NON-PREVENTIVE.

BY H. W. S. CLEVELAND, BURLINGTON, N. J.

A. J. DOWNING, ESQ.—*Dear Sir*—I have just been reading Mr. ALLEN's article on "paving to prevent the curculio," in the Horticulturist for this month. By his account, they were effectually stopped on part of a row of plums and apricots, by paving under the trees with flat stones, while the remainder of the same row, left unpaved, continued to suffer by their ravages as in former years. The insects must be much less migratory in that part of the country than with us; and as a proof that paving is not always effectual, permit me to give you some of my experience.

I have in my front yard, at a distance of some hundred feet from any other fruit trees, and separated from them by my house and a high, tight board fence, a single old Yellow Gage tree, which is every year loaded with fruit, and which I have been experimenting upon for six years, in the vain hope of saving a single plum from being destroyed by this insect,—the tree itself being healthy and vigorous. I have varied my experiments from year to year, and one year I tried the following: First, I took up all the sod about the tree, till I had laid bare a space fifteen feet square; and this sod was thrown into the hog-pen to make manure, and insure the destruction of any insects it might contain. On the spot thus laid bare I spread a peck of salt, and an equal quantity of air slacked lime. I then put on half a bushel of wood ashes, and then covered the whole space an inch deep with coal ashes, and having wet them, rammed it hard with a heavy rammer; then laid a floor of boards over the whole, as closely and evenly as possible, and filled up the chinks by spreading ashes on the boards, and sweeping and washing them in. Could stones make a more effectual paving? The effect was, that I had my labor for my pains. I did not save a single plum; every one being pierced before it was three weeks old. The insects, therefore, must have come from a distance.

Again, some years since, I planted a few nectarine trees for espaliers against a high fence, in a field where, so far as I know, no fruit trees, subject to the curculio, had ever before been grown; and certainly, at that time, there were none anywhere near it. But my first and two succeeding crops were completely destroyed, and I then grubbed up the trees. Both these experiments prove that, with us at least, the insect is of a more enterprising nature than those with which Mr. ALLEN had to deal, which, perhaps, were of Dutch descent.

At the convention in New-York last year, Mr. MANICE, of Long-Island, gave an interesting account of his success in guarding against the curculio, by a high, tight fence,—going to prove that they do not fly high. I have heard a similar opinion expressed by a distinguished horticulturist in this state; and I hope by another season to be able to give evidence on this question.

Truly yours, H. W. S. CLEVELAND.

Oatlands, Burlington, N. J., Aug. 14, 1849.

[Paving, as we before remarked, will not answer in *all* cases. Where the curculio is not very abundant, it is a quite sufficient preventive. But, where the whole neighborhood is full of this insect, it fails. ED.]

LOW HEADED FRUIT TREES AND ATMOSPHERIC CHANGES.

BY A NEW SUBSCRIBER, MASSACHUSETTS.

DEAR SIR—For the many gratifications I have received from reading the highly interesting, useful articles of yours in the Horticulturist, I should like to give you a good *hearty* shake of the hand. I have thought many times of a word or two, which I have desired to say for your readers, but have thus far delayed the saying for a more convenient season; but as you have no lack of good correspondents, perhaps you and I both are all the better for the delay. But an article in your last (August) number, from "A Pennsylvania Subscriber," on the management of fruit trees, has induced me to arrange a few ideas in some kind of order for a page or two of your magazine. Some articles by Prof. TURNER, upon the same subject, have been very valuable. The more of such we have the better. Let us have all the light and truth possible upon the subject.

I have long been trying to convince fruit-growers, that it was much better to grow fruit trees with heads and branches *near the ground*, than to have them branching high over head, and this for various reasons. 1st. The sun, which is, perhaps, in our hot and dry summers, the cause of more disease and destruction in fruit trees than all other causes together, is kept from almost literally scalding the sap, as it does in long, naked trunks and limbs. The limbs and leaves of a tree should always effectually shade the trunk and keep it cool. The leaves, only, should have plenty of sun and light; they can bear and profit by it. If trees were suffered to branch out *low*, say within one or two feet of the ground, we should hear very much less of "fire-blight," "frozen sap-blight," black spots, and the like. 2d. The ground is always looser, moister and cooler, under a low branching tree than under a high one. Grass and weeds do not grow a hundredth part so rank and readily, and mulching becomes unnecessary. 3d. The wind has

not half the power to rack, and twist, and break the tree, and shake off the fruit; a matter of no inconsiderable consequence. 4th. The trees will be much longer lived, and more prolific, beautiful and profitable. 5th. The trees are more easily rid of destructive insects, the fruit is much less damaged by falling, and the facilities for gathering it are much greater; there is less danger in climbing, and less of breaking limbs. 6th. The trees require less pruning, and scraping, and washing; and the roots are protected from the plough, which is too often made to tear and mutilate them. Now these seem to me indisputable facts, sufficient to silence all objections. But the farmer says he must head his trees out of the way of his cattle, so that the boy can ride the horse to plough under them; for he must have *all* the ground planted with something. Nonsense. If you cannot afford the tree a few feet of ground, and good care and cultivation, then cut it down and burn it. If a tree is worth growing, it is worth proper care and culture. Any sensible man must be convinced of this. It is poor business,—this pruning so close and high, in order to plough and plant under the trees. Nurserymen are greatly to blame for so much high pruning, and forming the heads of the trees so high when young. They are, many times, more than half spoiled. An apple or cherry tree is nearly twice as valuable for shooting out low, near the ground, especially on the southwest sides.

That scourge of the pear tree, of which we hear so much, would be much less prevalent, if the trunk and limbs were kept low, and well shaded by their foliage. Let anybody, whose trees are subject to "fire-blight," (or rather, as it should be called, *sun-scald*,) try the experiment and see. It is owing to the hot blazing sun, for weeks and months together, with scarcely a cloudy day, with five or seven days in succession in which the thermometer rises to 90° or 100° or more in the shade, and would show, if suspended in the sun upon the bark of a tree, from 125° to 150°. Such scalding is enough to make tropical trees exude their gums and resins, and enough to show the absolute necessity of protecting the trunks of trees from such injurious effects. Let any one set out two trees which branch out, say six feet high; let one of them lean very considerably to the north, and the other as much to the south, so that the body shall be well shaded, and see which will grow the fastest, (having equal advantages of light, soil, moisture, &c.,) and be the longest lived and most fruitful. A few observations and experiments of this kind will convince any one that limbs and leaves are valuable for shade, as well as other purposes; and that low headed trees are much better than high, in most cases. If Prof. TURNER will limb his cherry trees out very near the ground, he will not be so much troubled with gum oozings, bark-bindings and crackings.

A word more, in conclusion, about what I suppose to be the cause of so much fire, and other blight, in trees, and also in fruits and vegetables. I had never a doubt of its being, in some way or other, *atmospherical*; and, moreover, could be readily accounted for. A gradual and perceptible change in our seasons has been going on for the last fifteen years. Our summers are drier and hotter than they used to be. We have fewer and shorter storms and showers, with scarcely any lightning and thunder. The electric fluid has some how or other got into an unnatural state, and nature seems not to have the regulating of her own equilibrium, but has it done for her artificially, in a very unsuitable man-

ner; for which she is neither thankful nor disposed to submit to patiently. She has her own ways, her times and seasons, her own conductors and non-conductors, her marks and bounds, and does not thank us for our interferences and meddlings. She never licensed us to use her thunder and lightning for political purposes, or to catch thieves and rogues with. She dislikes our golden calf and iron horse worship, and will not suffer man to steam himself along to his millenium with such accompanyments. She hates monopolies and exclusive privileges, and would manage her own affairs in her own way, and in her own times and seasons.

But metaphors aside, I believe our ten thousand miles of railroads and telegraphs are the cause, the true and primary cause, of nearly all this blight and disease, of which we hear so much from all directions. We heard nothing of this loud complaining till we had long lines of railroads and telegraphs. We had no potato rot before, nor such numberless destructive insects, and curses and reproaches to load them with. Why not? How can railroads effect the matter, and produce such evils? That they do, I have no more doubt than I have that suitable conductors will protect a building from destruction by lightning. That they are strong conductors of the electric fluid, no one can deny. That they operate to conduct this fluid from the atmosphere, carry it off, or diffuse it too much, so that there is a deficiency in the same for a healthy vegetable or animal life, is at least very probable, if not certain. So we have tree blight, potato rot, cholera, and all manner of ills. The atmosphere, in its natural state, is *positive*, and the earth *negative*, electrically. Such natural relationship seem now to be destroyed, or much disturbed, and the effects are visble enough in many ways, and, I doubt not, will grow more and more so for years to come. For the last six or eight years, or more, we have had dry seasons, or times of drouth, long enough to materially injure vegetation. The present season it has been unusually long and severe. Throughout New-England, it has been from ten to twelve weeks' continuance, without rain enough to moisten the roots of corn and potatoes; nor have similar seasons been uncommon of late years. We have had but two or three bits of thunder showers this season, (up to Aug. 10th,) and no one of them big enough to more than lay the dust for a day, although there were six days in succession in June, commencing the 19th, hot enough for a tropical August. On the 19th and 20th, the thermometer rose to 92° in the shade. On the 21st and 22d, it reached 100°; and on the 23d and 24th, 92°. July 11th, 12th and 13th, the mercury rose to 98,° 99° and 101°, on a fair trial in the shade. Now is not a blazing sun,—capable of giving the mercury such an awful elevation, and keeping it there so long, with such paucity of electricity that not a cloud floats the blue ethereal, big enough for a *parasol*,—sufficient cause for the potato and other rots, blights and witherings? Fruits fairly exposed to the sun in some places are literally baked. So are potatoes oftentimes in the hill done brown, like a herring at the roasting. Now with this, to me, all sufficient cause, manifest enough too I should think, why all this moonshine of insect theories, visible or invisible?

The electric fluid is as important in the animal and vegetable economy as air and water, and should not be disturbed, or turned from its natural workings. That it is, very effectually, by so many railroads and telegraphs, I have no doubt. Thus

come long drouths, excessive heat, potato rot, and many other ills.

Now I want you, Mr. Editor, to call upon some of your correspondents, of lynx-eyed sagacity,—Prof. Turner, Dr. Beecher, Mr. Longworth, or Dr. Valk, (or do it *yourself*,) to give us their views upon this matter. It is a subject of interest and importance, and we want more light upon it, and must have it. If railroads do such mischievous things, then the fewer we have the better.

[Our new correspondent's spirits are, evidently, affected by the long drouth; and we congratulate him on the copious rains which have fallen since the receipt of his letter. We should be half inclined to agree with him about the effects of the railroads and telegraph wires, except that England is a *cobweb* of such conductors, and nevertheless has, we understand, had a *wet* season. Ed.]

A New Correspondent.

B——, Massachusetts, Aug. 14, 1849.

DESCRIPTIVE NOTES OF NEW STRAWBERRIES.

BY MARSHALL P. WILDER, BOSTON.

Dear Sir—I have read, with pleasure, the various articles in the Horticulturist, and other periodicals, which have of late appeared on the "vexed strawberry question." Although I have nothing of special interest to communicate, I herewith add some notes from my memoranda, which I hope may be of service to those desirous of proving new varieties. I have tested some thirty sorts this year, either partially or fully. Many of these were highly lauded, and sold at exorbitant prices; but very few of them are worthy of extension.

Myatt's Eleonora.—Flowers, staminate; fruit, extra large; form, conical, long, flattened; colour, bright scarlet; flavor, juicy and good. Medium bearer,—setting about one-fourth of its blossoms.

Myatt's Prolific.—Staminate, large, resembling Eleonora, but more pointed; colour, light glossy scarlet; flavor, sweet and rich. *Not* "prolific."

Hooper's Seedling.—Staminate, medium size; form, conical, occasionally coxcomb shape; very deep crimson; surface, highly glazed; flavor, rich, sweetish.

La Lageoise.—Flowers, staminate, very large, and highly ornamental; fruit of moderate quality. Very unproductive.

Myatt's Mammoth.—Staminate, with ample cone of pistils; form, irregular oblong, flattened; colour, very dark, almost black; flavor, juicy and rich; size, large. Sets about 40 per cent. of the blossoms.

Aberdeen Beehive.—Staminate, below medium size. A good bearer for one of this class, but too acid, except when dead ripe. This variety forces well, as will most of the staminates, where light and heat are at command. Except for this purpose, it is no acquisition, whatever may have been its character with the vender.

Richardson's Early.—Pistillate; size, medium; colour, very dark crimson; flavor, pleasant sub-acid, good. Ripens with the Early Virginia, and produces well,—the best early pistillate, and makes a good mate for this sort.

Richardson's Late.—Staminate; the pistillate parts being well developed. Fruit, large, roundish, with short neck; colour,

light crimson or scarlet; flavor, rich subacid, sprightly and good. This kind ripens its fruit in succession for several weeks,—a good bearer for one of its class, and was on exhibition this year as late as July 21st.

NEWLAND'S MAMMOTH ALPINE.—Many thousand plants of this variety have been sold the past year, and I doubt not honestly, under the belief that it was really a new and valuable sort. It is not, however, dissimilar to the *Old Red Alpine*, Stoddart, Hasting's Monthly, and many others, raised directly from seed of that variety. The bearing properties are all that has been warranted by the vender; and the secret of which is correctly explained by the "Old Digger," in your last number of the Horticulturist, on deep and rich soil.

BURR'S NEW PINE proves equal in delicious quality with the Swainstone, but, I apprehend, is rather a moderate bearer.

BURR'S No. 1, (not named,) received from Mr. ERNST, is a pistillate plant, and bears enormous crops. Fruit rather too acid.

BLACK PRINCE is very unproductive with me. Does it still bear well with you, and what is the soil and treatment? [Very fine and productive here; requires a deep, rich, and perhaps rather clayey soil. ED.]

EBERLEIN.—Slightly staminate; proves a productive variety, with somewhat of the flavor of the Hautbois.

CUSHING, MARY, and many of Dr. BRINCKLE'S seedlings, are very prolific, and would no doubt be valuable as market fruits; but in quality, hardly worthy of general cultivation. It seems now to be generally conceded, that the *Early Virginia*, *Hovey's Seedling*, and the *Hudson*, are the most profitable for this purpose; but the Willey, (much like the Hudson,) and Jenney, are even more productive.

Mr. JENNEY informs me that he sold of his seedling, from *less than three-fourths of an acre*, this season, (including about one-fifth of the Virginia as fertilizers,) 2,700 boxes (quart size,) and that he packed at least 500 boxes more,—making, in all, 3,200 boxes, or 800 dollars, at twenty-five cents a box; the price at which his crop was engaged.

BOSTON PINE, I notice, has done well with you. The present dry and hot season has been favorable for all the *staminate* sorts. This is a fine flavored, handsome fruit, but like most of this class, must have a plenty of "sea room" and good treatment to give satisfaction.

I still entertain the opinion that *staminates*, (or as they are termed by some, *hermaphrodites*,) cannot be relied on for large crops. I think if any one will compare their bearing properties with the best *pistillates*, he will find the ratio not greater than as 6 to 10. There is, however, a great difference with the *staminates*, in this respect; some of which, unless kept thin, and exposed to light and heat, are almost barren and abortive.

P. S. You are probably aware that we have no pears or peaches, and very little fruit of any kind in this region. The "oldest inhabitant" cannot recollect a season when, in proportion to the trees, there was so little. There may have been more than one cause for this failure; and I attribute it to the cold of November—about the middle—when the thermometer went down to 12°, the philosophy of which you understand. There are a few exceptions, where the crops are tolerable; but these are on sandy, light soils, where the wood and juices were early matured. I do not think I shall have fifty varieties of pears on my grounds, and in all not one bushel; and I have scarcely a new sort to show.

I noticed, however, a few days since, three specimens of March Bergamot on my tree, and at Mr. WALKER's, about a dozen Josephine de Malines, from scions which he had of me only two years since. This would indicate an early bearer; but I have several strong trees, which are quite reluctant to set fruit buds.

Yours, M. P. W.

Boston, Aug. 11, 1849.

FOREIGN NOTICES.

BRITISH TEA CULTURE.—The relation between vegetation and climate is a much more important horticultural consideration than many imagine. We learn from its study not only why the grapes of Fontainebleau and the Clingstone peaches of Italy cannot be obtained in England, but also that with such means as gardeners at present command there is no possibility of obtaining them. Cuttings may be brought, trees may be imported, the stocks on which they are grafted may be varied, but the result will still be unsatisfactory. The climate of Great Britain is not that of Paris or Naples. If this were more generally borne in mind, gardeners would escape the blame imputed to them by unreasonable persons, for not performing physical impossibilities.

But if the attentive study of this important and most interesting subject teaches us to know what is impossible, it also guides us in determining what may with certainty be accomplished. It would have taught the speculators in Assam tea to distrust the issue of their enterprise, as it, on the contrary, inspired the scientific advisers of the East India Company with most entire confidence in the success to be anticipated from cultivating tea in some of the northern provinces under British rule.

The introduction of the cultivation of tea into the Himalaya is one of the most important events in the social history of British India. Independently of the commercial advantages that must result from it, the preparation of the leaves will of itself afford profitable employment to a peasantry sunk in the lowest and most helpless poverty, not from their own lazy habits, but from the total absence of all remunerating occupations. Dr. Hooker gives the following example of the condition of the peasantry in the north of India. A youth had been eaten by an alligator, and this is the state of his parents:

"The poor woman earns a scanty maintenance by making catechu. She inhabits a little cottage, and has no property but two bhiles (oxen,) to bring wood from the hills, and a very few household chattels; and how few these are is known only to persons who have seen the meagre furniture of Dangha hovels. Her husband cuts the trees in the forest, and drags them to the hut; but he is now sick; and her only son, her future stay, was he whose end I have just related. Her daily food is rice, with beans from the beautiful blue-flowered Dolichos, trailing round the cottage; and she is in debt to the contractor, who has advanced her two rupees (about 4s.) to be worked off in three months, by the preparation of 240 lbs. of catechu. Rent to the Rajah, tax to the police, and rates to the Brahminee priest, are all paid from an acre of land, yielding so wretched a crop of barley, that it more resembled a fallow field than a harvest field. All day long she is boiling down the catechu wood, cut into chips, and pouring the decoction into large wooden troughs, where it is inspissated. This Zillah is famous for the quantity of catechu its dry forests yield. The plant is a little thorny tree, erect, and spreading a rounded coma of well-remembered prickly branches. Its wood is yellow, with a dark brick-red heart: it is most productive in January, and useless in June."

To provide employment for people like these is the first duty of a civilised government, and was no doubt the cause of Lord Hardinge's earnest advice to the Court of Directors that the tea plantations should be aided by the whole power of the Indian Government.

A highly interesting account of the "progress of the culture of the China Tea Plant in the Himalayas, from 1835 to 1847," has been given by Dr. Royle, to whose judicious counsels its establishment there has been mainly owing. The following facts, which we borrow from his pages, will explain briefly the history of the experiment, and the highly satisfactory results which have attended it:

"It was in the early part of the year 1827 that I first mentioned to the Earl Amherst, then Governor-General of India, the probability of a successful cultivation of tea in the Himalayan mountains, and included it specifically in a report which was presented to the Indian Government at the latter end of that year, stating that 'It does not appear by any means so delicate, or so limited in geographical distribution, as is generally supposed, and although it appears to attain the greatest perfection in the mild climate about Nankin, yet it flourishes in the northern latitudes of Pekin and of Japan.' On Lord William Bentinck visiting the

Saharunpore Botanic Garden, in 1831, I again mentioned the subject, and included it in the report which was presented to his lordship, in which I stated my wish 'to attempt the cultivation of the tea plant, of which the geographical distribution is extended, and the natural sites sufficiently varied, to warrant its being easily cultivated.'"—"Though unacquainted with the fact, I was, in the year 1839, informed by Mr. Greene, that Sir Joseph Banks had many years previously recommended the cultivation of tea in the Himalayan mountains, and that Dr. Govan had also done so at a later period. Dr. Wallich also, in the year 1832, presented a paper to the Committee of the House of Commons, recommending the cultivation of tea in the districts of Kemaon, Gurhwal, and Sirmore. Not having had an opportunity of detailing my reasons for the opinions which I had so long entertained, I did so in my 'Illustrations of Himalayan Botany,' pp. 107 to 127, published in 1834."—"At the time that the above paper was printing in this country, Lord W. Bentinck, with the sanction of the Court of Directors, had determined upon attempting the cultivation of tea in India. A Tea Company was appointed, who reported that, 'the experiment may be made with great probability of success in the lower hills and valleys of the Himalayan range.' To this they say they were led by a 'very able and interesting letter of Dr. Falconer on the subject.' This letter, or report, is remarkable for coincidence in argument and in opinion with what I was at the same time writing and printing in England; and this without any communication of ideas; for the two essays must have crossed each other at sea."—"Tea seeds arrived in Calcutta in January, 1835, and produced numerous plants, which were dispatched to the districts where it had been determined to establish tea nurseries, that is, to Assam, and to the Kemaon and Gurhwal portions of the Himalayan mountains. I had recommended several situations, as Bheemtal, Hawulbagh, Deyra Doon, and Pinjore, in valleys elevated from 2000 to 2500 feet; Almora, Jurreepanee, Nahn, and Sabathoo, at elevations of from 4000 to 5000 feet; and one locality, Mussooree, at 6500 feet of elevation, in 30° of north latitude. Dr. Falconer, without any communication, selected Chejooree, Rama Serai, and Koth, at elevations of 4000, 5000, and 5300 feet; with two situations, Ruroo and Bechur-bagh, in Sirmore, at 5100 and 5400 feet. He subsequently selected the valley called Deyra Doon, elevated 2500 feet, as a favorable site, especially after irrigation had been facilitated by the establishment of canals. Sites were at the same time selected in Kemaon by the commissioner, Mr. Traill, and placed under the charge of Mr. Blinkworth, a plant collector of the Calcutta Botanic Garden, until October 4, 1839, when he was placed under the general superintendence of Dr. Falconer. One nursery was established at Bhurtpore, between Bheemtal and the Ghagur range, at an elevation of 4500 feet; and a second nursery at Luchmaisur, near Almorah, at 5200 feet of elevation. The general directions given by the Calcutta Tea Committee were, that 'a decided winter climate of six weeks or two months' duration, with frost as well as snow, is essential to ensure final success with really good sorts of tea."

The plantations were thus established, and immediately began to grow with all the vigor that had been anticipated. The next step was to obtain some Chinamen who understood the art of preparing tea; not an easy task. The men first engaged refused to proceed to Kemaon; Dr. Wallich, however, succeeded in engaging nine others, who reached their destination in April, 1842. In January, 1843, the first sample of Himalayan tea was received in England, and "reported on by members of the Chamber of Commerce, who pronounced the tea to be a very good marketable article, and worth in London about 2s. 6d. per lb. The specimen sent to London was reported on by Messrs. Thompson, of Mincing-lane, and pronounced to be 'of the Oolong Souchong fine kind, flavored and strong. This is equal to the superior black tea generally sent as presents, and better, for the most part, than the China tea, imported for mercantile purposes.'"

Dr. Jameson, then in charge of the tea plantations, and from whom this sample was received, "having proceeded to visit the Kemaon tea nurseries, reached them in April, 1843, when he found them 'looking admirably, and the Chinamen employed in manufacturing black (Pouchong) Tea;' which, he states, 'appears to be a much superior quality.' On the 30th August there were forwarded by the overland route 16 small canisters of the above tea, covered with wax-cloth to protect it from wet. The wax, unfortunately, gave a little of its flavor to the tea, as the canisters got injured, and did not arrive at the India-house before the month of December."

These teas, notwithstanding the injury they had sustained from unskilful packing, were reported by the brokers to be worth from 1s. 2d. to 3s. 6d. per lb.

Since 1843 various other plantations have been established. "The latest report of Dr. Jameson shows the quantity of land under tea cultivation, in the districts of Kemaon and Gurhwal, including the Deyra, to be 176 acres, and the total number of plants, 322,579. The plant is stated to be thriving in different localities, extending over four degrees of latitude and three of longitude, and that 100,000 acres are available in the Deyra only, for the purpose of tea cultivation."

In July, 1846, a sale of tea took place at Almorah, "with considerable increase in the prices. The average price was 6 rupees 14 a., and some of it sold as high as 7 rupees 7 a., that is, something more than 7s. per lb., without any duty; and it was a further gratifying fact, that most of the tea had been purchased by natives."

In August, 1847, "Dr. Jameson wrote from

Paoree that another sale of tea had taken place on the 9th August, at Almorah. 'The amount realised for green tea varied from 10 rupees 8 a. to 9 rupees 4 a. (that is, more than 9s. and 10s. per lb.) For black tea, the amount realised was 7 rupees 8 a., the maximum, and 4 rupees the minimum.'"—"On the 4th October, he states, 'I have just received orders from Government to form tea plantations on the whole of the hilly districts of the northwest frontier, from the Sutledge and new country lately acquired west of that river, to the Ravi;' and that he proceeds immediately towards Kangra to inspect and select sites. The Governor-General pronounces the tea to be as fine as any Chinese tea he had ever drank. Dr. Jameson concludes by stating his conviction that tea will shortly become a most important article of production from the northwest provinces."

This amount of success is the more remarkable when it is considered that only the inferior species of tea is as yet cultivated in India, and that the *art* of manufacturing tea, like the art of wine-making or tobacco-making, can only be acquired by much experience. The samples of the teas which we have tasted, both black and green, although not equal to the finest Chinese samples, were quite as good as the tea usually consumed in the houses of the middle class; and leave no possible room for doubt that, with experience, and a better description of tea plant (which Mr. Fortune is now specially engaged in China in obtaining,) the tea trade of India will be a most formidable rival to that of the Celestial Empire. It is already a matter of official record "that, though the Pouchong (black) tea sold at an average rate of 6 rupees 8 a. 8 p. per seer, and that at least half the quantity sold was bought by natives, the coarse Bohea tea was reserved and sold to the Bhoteahs at a price varying from 2 rupees to 2 rupees 4 a. per seer. 'It has been purchased by them, in order to carry it across the passes into Thibet. Nor will it be long, if the importation of Kemaon tea into Chinese Tartary is not prohibited, before that market is wholly supplied from the British provinces."

The quantity of tea manufactured in 1848 is officially reported to be 2656 lbs. Dr. Jameson states "that, of this, he had just despatched 600 lbs. of black and green tea to this country, and that 'it was finer looking than any sent in former years;' also, that, 'by the end of this season, there will be 400 acres under cultivation at Kolaghir in the Doon;' and 'at Paoree I expect to have 200 to 300 acres;' and that he has 'about 250,000 seedling plants ready to transplant.' 'Last season I sent a lac (100,000) of the plants to the Kangra valley, where most of them are doing well;' while 'the seeds collected from our own plantations this season amount to upwards of 2,000,000. From the plantation of Deyra (Kolaghir) we shall be able, in the course of eight or ten years, to raise a sufficient number of plants to plant the whole Doon.'"

We heartily congratulate Dr. Royle and his Indian coadjutors upon the success of their great experiment; and we cannot close these hasty remarks more appropriately than in his own words: "I have been gratified to find that the inferences deduced from scientific data have been fully borne out by the practical results. There is no doubt that if the best kinds of tea plant are obtained from the northern districts of China, and with them a few manufacturers from the places where the teas most esteemed in commerce are prepared, and which are consequently those most in use by the British public, that any kind or quality of tea may be prepared as good and as cheaply in the Himalayas as in China. For we have an equal command of soil and climate, with cheap and abundant labor, unoccupied land at a low rent, with comparatively small expense of carriage even to Calcutta. But India itself, with other parts of Asia, will consume a large quantity of tea, when it is obtainable at a moderate price, and even if of a quality inferior to what has already been produced in the Himalayan mountains. *Gardeners' Chronicle.*

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GARDENS ABOUT LISBON.—"*Lisbon, Jan.* 14: On Saturday I went to see an orange grove beyond Belem and a little in the interior. Such a road through the quinta! that even (bold as I am, and used to bad roads,) I thought of getting out of the carriage. The day was like one of the loveliest of May. The best thing I saw on turning round a corner was a group of almond trees in full flower; but the flower is not like that of our almonds. It looked like beautiful Codlin bloom, though larger and more open. The orange trees in the groves, or rather plantations, are not picturesque, not being allowed to grow large, and they are pruned—not forest trees like those near Seville; but the walk through them and the getting out of stuffy Lisbon was very refreshing. The place was a pretty quinta once, but now quite wild and neglected. I had the pleasure of gathering myself a nosegay—China Roses, Paper Narcissus, the orange-coloured Bignonia, and Cineraria, from such a bush. The ground under the orange trees in parts was covered with the pretty yellow larged flowered Oxalis, which we grow in pots, and the pretty dark purple and green striped Arum. Altogether the excursion gave me an intense longing for Cintra, and if the weather of today were to last, I do think I should be tempted to go for a day; but it will be wiser to wait till a few wild flowers come out. The young orange trees are planted in squares, protected by hedges of high reed, especially the Tangerines. *Jan.* 17. —Again a splendid day, though the first of the morning was foggy—window open, and my room perfumed with the flowers which Madame de M. sent me, and those I brought yesterday from Pombal, where, as the boat was ordered and the day very favorable, we went. We set out at 10 o'clock, that we might be home by sunset, as it

is cold after that time (that is, what is called cold here.) The row down the river was very delightful; the bands on board her Majesty's ships playing, and marines tumbling into boats to go ashore to be exercised under Sir C. Napier. The ships very fine. Presently a Brazilian brig, that had been exchanging salutes with the guard ship at the mouth of the river, begins banging away right and left in honor of the British ships in the river. We see flash, smoke, and hear report, the echoes on each side of the river repeating every sound. Her English Majesty's ships not behind-hand in returning compliments. We intended to land close to the quinta which we were to visit, but before we got there the boatman (that fine fellow who rowed us to Casilis when you were here,) says No; that there were breakers in the river, which, with the tide and wind, would make our journey unpleasant, and so we put into a little dirty village a mile and a half on this side the quinta, and I had a donkey to ride and a boy to drive it (the latter brute had eaten so much garlic that though he was always behind the donkey I always smelt it, and thought he had the power of breathing round a corner.) The quinta is situated at the mouth of the Tagus, beyond the convent on the right bank. It was given by the king to the great Marquis de Pombal, and again I longed for you to have seen it, and could not help reproaching my conductor, but he says truly the time of your stay was short, and that there were two or three days lost by rain; indeed the weather is finer than when you were here, I think, in October. We were not allowed to see the house, because the Marquis was there. The house and gardens are much in the Italian style, the only things Portuguese consisting in parts of flights of stairs and fountains and seats and the coloured tiles we so much admired at Seville. Nothing can be better than the gardens for their size, the beauty of them consisting in their formality; those near the house are laid out with low Box edgings, those distant with high Box hedges I call them, and double ones sometimes. They are so designed that, like those of the Junquera, which you saw near Belem, winter or summer, with or without flowers, the effect is good; but they are better than the Junquera, for they have on every side splendid trees and orange groves of great extent, and here the orange trees were of large size, and especially when seen from on high are really very beautiful; long walks, shady, and in the hottest days of summer impervious to the sun's rays, are to be enjoyed on one side of the formal gardens; very fine deciduous trees edge a small stream, over which several bridges are thrown, and walks like those of Ramalhao are not wanting; this stream separates the gardens in two parts, and the style of each is the formal, as I have said before, but different. In the lower one, which appears the oldest, and in which are the high Box edgings and a beautiful fountain, there is a Dragon tree, finer than that at the Botanical Garden. I measured the trunk of this one; it is more than two yards round; the limbs look like great snakes, the head had been covered with great spikes of flowers; it was, I suppose, 20 feet high. Charming stone columns supporting busts are placed at the entrance of each great walk, the offices at the end of the garden are made ornamental and a finish to it, by a beautiful architectural wall; there are stone flights of steps, with carved balustrades, highly finished; busts, vases, and every sort of ornament. But the whole scene is spoiled—by what? The most total neglect; weeds grow in every path, choke up the hedges, force the stones out of their places. All that is done is to cut the Box square, and shape the corner Box trees of the parterres. A more neglected place I never saw. A more enjoyable one could not be desired, and I should prefer it to Cintra, as being close to the sea, and because the climate is so fine you might live there both winter and summer. We crossed the road and went down a walk more than half a mile long (Grass,) hedged with tall Laurustinus, breaking into flower, while the tall blue Periwinkle in full blossom, but pale, was climbing up them. On each side of the hedge were vast groves of orange trees, loaded with ripe fruit, which perfumed the air. On one side, at the end of this, we found a great blue wall (semicircular,) encrusted with the above mentioned tiles, and a high fountain in the centre, with the water trickling through great masses of Maiden-hair fern into a basin below. We ascended a flight of steps near the fountain, and returned to the gardens along a high terrace that overlooked the great orange groves, real gardens of the Hesperides, for their fruit brings gold. The day was so lovely that I walked about. Again sat down on the stone steps under the Dragon tree, gathered violets, and was sorry when the time for the tide to turn obliged me to return to my donkey. The road back gave us beautiful views of sea and land, &c." *Gard. Chronicle.*

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Potato Rot.—The dry cool weather which we have enjoyed for the last few weeks will have saved the potato crop from destruction, if anything can. But as all is still uncertain, and as appearances are becoming every week more unfavorable, it is desirable that the attention of cultivators should again be directed to a statement made in our columns of the 9th of June. It is there mentioned that Mr. Tombelle Lomba, of Namur, had saved his crop every year by cutting off the stems, *after flowering*, and while yet fresh and green, and then covering the ground with earth to the depth of about 1¼ inch; the top-dressing thus applied not being disturbed till the potatoes were ripe.

This proceeding appeared to have the advantage of seriously diminishing the amount of the crop, even though it preserved the potatoes; but it would seem, from a recent despatch from Lord Howard de Walden to Viscount Palmerston, that this has not proved to be the case. The English

minister at Brussels having caused some inquiries to be addressed to Mr. Tombelle Lomba, that gentleman has returned a reply, from which the following is an extract:

"I can state in the most formal manner, that when the potato stems are cut off with a sickle properly sharpened (*avec une faucille dont le tranchant est convenable*) the tubers are not at all interrupted in their growth; that they remain attached to the stem until they are ripe, just as if the haulm had not been removed; and that *they acquire as large a relative size as potatoes which have not undergone the operation.* I have so often observed this continuation of growth that I can speak positively to its going on without the slightest interruption, and that the treament which I have recommended *is not attended by any loss whatever of size or quality.* I can offer the most positive assurance as to this; it is only necessary to take great care that the implement employed in cutting off the haulm shall be so sharp that the stems may be separated without disturbing the roots (*sans les soulever, afin de ne pas les detacher des fruits.*) It is also proper that the stems should be removed from the ground immediately after being cut off; and especially that no time be lost in covering the surface of the ground with a layer of earth at least half an inch thick."

We earnestly beg our friends in all parts of the country to try the experiment in the manner so clearly pointed out by this Belgian gentleman. Should it prove, as he confidently predicts, that the crop is thus to be saved, not only will a most difficult problem in cultivation have been solved, but some physiological questions will arise, to which attention has never been sufficiently directed. It is certain that potatoes cannot be perfectly formed without the agency of leaves. Leafless abortions indeed will appear and feed upon their parent tuber till they have exhausted it, but they are mere abortions, and of no account. If leaves are thus necessary to the production of potatoes, it would seem at first sight that to remove the branches can only result in the loss or great injury of the crop. But it may be that potatoes, after having arrived at a certain condition, possess the power of continuing their growth by their own proper and unassisted vitality; and this is rendered the more probable by the well known fact that the flour which gives them their principal value does not descend directly from the leaves, as flour, but is in the first instance of the nature of gum, or some other fluid organisable matter, formed in the leaves and sent downwards into the tubers. Having reached the tubers it undergoes its final change, and from a soluble substance is gradually converted by their vital force into soluble flour. To that final operation we have no reason to suppose that the leaves contribute; all that they do is to produce the matter out of which the tubers generate their flour.

It must be observed that Mr. Tombelle Lomba does not cut off the stems *till after flowering.* It is possible that at that time the leaves of the potato have done their work, so far as tubers are concerned, and that their further duty is to nourish the fruit. If so, we have an explanation of the result of which that gentleman so positively speaks. At all events, since we have a reasonable assurance of his practice having proved successful in Belgium, and as there is nothing in it at variance with possibility, or even probability, it is certainly one that has strong claims upon the attention of practical men. *Gardeners' Chronicle.*

DOMESTIC NOTICES.

National Convention of Fruit Growers.—The second session of the American Congress of Fruit Growers will be held at Castle Garden, in the city of New York, on Tuesday, the second day of October next, at ten o'clock, A. M.

As it was, at the last session, resolved that all pomological, horticultural and agricultural associations of North America, be invited to send delegates to this Congress, the undersigned respectfully urge upon all such societies the immediate appointment of delegations composed of their most experienced fruit growers and pomologists, so as to make the coming assemblage the most interesting one, on this subject, ever held in this country.

The undersigned also respectfully invite all pomologists, fruit growers, orchardists, and nursery men, and all others interested in the subject, to attend the coming session.

Among the objects of this Congress are the following, viz: To endeavor to ascertain by comparison of fruits, the relative value of varieties in different parts of the country:

To ascertain from the reports of the State Fruit Committees, which are the best varieties for local cultivation, and which are adapted to general cultivation:

To compare opinions respecting the value of new varieties; to discuss the diseases of fruit trees, the best manures and methods of culture, unsettled points in pomology, and to elicit and disseminate information and maintain a cordial spirit of intercourse among horticulturists.

Essays and papers may be expected from distinguished scientific and practical cultivators, on various interesting topics in pomology and horticulture.

In order to increase as much as possible the interest of the convention, the delegates are requested to bring with them, (carefully packed and labelled, so as to present them in good order,) specimens of all fruits grown in their vicinity, that may be worthy of notice, together with a small branch and leaves, if possible, of every new variety.

Every contributor is earnestly requested to make a list of his specimens, and present the same with his fruits, in order that a report of all the varieties entered, may be submitted to the convention as soon as possible after its organization.

The convention will hold its meetings in the New Saloon, kindly tendered by the American Institute for its accommodation. MARSHALL P. WILDER, (of Mass.) President.

S. B. PARSONS, of New York; P. BARRY, of New York; GEO. B. DEACON, of New Jersey, Secretaries. ....

RETROSPECTIVE CRITICISM.—*Mr. Editor:* As I have been a much interested reader of your journal from its first publication, I propose to make monthly criticisms on such of its articles as may demand a note or two of comment, as they occur to my mind in passing, and by way of example I send you the accompanying remarks. They are, as you see, in the "free and easy" fashion of one who speaks what he thinks; not unprofitable, perhaps, by way of addenda to the general reader. If this meet your approbation, I propose to continue them, at least for a time.

CRITIQUE ON THE JULY HORTICULTURIST.

Your Leader, on Cemeteries and Public Gardens.—How refreshing and grateful it is to contemplate the growing taste in our country for rural cemeteries! So rapidly is this correct and delightful taste spreading throughout the northern states, that hardly a town of any note but has already established, or is about to establish, its public cemetery in some picturesque, retired spot. When, fifteen years ago, I first visited Mount Auburn, near Boston, and looked around among its sweet, secluded graves, and read its silent, yet eloquent monuments, I almost thought it a pleasure to die, and be so buried; at least a consolation for leaving so many bright and beautiful things in life, to lie down in such a spot, where good men would tread around, and holy thoughts breathe over my dust!

In an after-conversation with a distinguished and reverend poet, on the subject of rural cemeteries, and of Mount Auburn, I shall not soon forget the delightful manner in which he spoke of his own selected burial place in that consecrated ground, —may it be long before he shall be called to occupy it!—that it lay on a shady knoll, looking out on the distant bay with its shining waters, the rising wooded hills beyond, and, dearest of all to him, the spire of his own hallowed church in the city; as sweet a vibration of poetic feeling as ever ran in his own touching verse.

But I digress. You can employ your pen no better than in often waking the attention of our countrymen to the importance of this subject, as well a promoter of public health in our cities and towns, as enlarging our taste for the useful and the refined.

In recommending public gardens, I fear you but address deaf ears. When our intelligent and enlightened Americans cease to mutilate objects of taste in art, to whittle away banisters, and railings, and columns on our public buildings, and places of resort, and cease cutting their names and initials on every tree which shades such of our beautiful grounds as are already frequented, and behave as well in such particulars as barbarian Turks, and infidel Frenchmen, and Italians, and the "almighty dollar" ceases to be the highest god of their worship, then may we hope to see your suggestions carried out. But until then, "Barnum's Museum," *et id genus omne*, will continue to pocket the spare shillings of the multitude, and those who really love the rural, and its pleasures, will either resort to those spots for enjoyment over which they have the exclusive control, or do, as they always have, without them. A chapter might well be written on this subject, which a few might read and appreciate. But it would pass, and the multitude would move on as before, regardless of all right taste and improvement in a subject that did not promise to put cent per cent into their pockets. [But we believe it will put cent per cent, and cannot see why the public should not respect the property in beautiful public gardens, as well as luxurious hotels and steamboats. ED.]

"*On Bark-bound Cherry Trees.*"—I don't believe a word of any such necessity. If the *hide-bound* tree is properly cultivated at the root, and proper manures applied, it will find out its own method of "bursting the bark," "tough as a sheet of tin" though it be, which, by the way, it is not. Why not, when turning out a hide-bound, overlabored horse to pasture, after a dose of physic, or a smart bleeding, strike with a knife his back and sides, that through his expanded hide the new flesh may grow! The scurf and dandruff removed from his skin by the curry comb is all that we suppose the brute requires; and why should the vegetable, in the physiology of which it in many particulars resembles the animal, be treated more rigorously? The scraper, the brush and soap-dish will do its full office for the tree, be it cherry or other. Professor TURNER's difficulty, to which Mr. NEWTON alludes, lies deeper than any mechanical process which he has described. The deep, rich, alluvion, and the rapid and extreme changes of atmosphere in Illinois, acting decidedly on the exotic (as they too often are) trees reared in other and distant localities, will, on examination, be found the chief obstacles in their cultivation. It will be found that these new and peculiar soils must, in many cases, have fruits *of their own origin and growth*, to be successful; and the sooner

their pomologists practice upon this principle the better. This, among other important matters, will be ascertained through the pomological meetings and conventions.

On the Principle of Suggestion in Rural Taste.—Capital. W. talks like a man of sense. Strange that people, close, calculating and generally shrewd in their own affairs, as are the Americans, should, in the *very most important item* of their comfort, farm out their wits in the composition of their houses, to a set of empirics, such as our modern house builders, too many of them, are. I have more to say on this matter as occasion may offer. Till then, and afterwards too, heed the remarks of W. His allusions to the "fine carriages," reminds me of the old gentleman's story of his brass andirons, that cost him two thousand dollars! Five, was the *first* cost, but then the old fire-place and mantelpiece that so well comported with the old iron "dogs," which the new "shiny" ones replaced, appeared so awkward to the good wife and daughter, that they had to come down; and so, one after another, the quiet old house was altogether pulled away, rebuilt, and new moddled, until a piano was introduced, and the family, before contented and happy, was really miserable from their altered house and apparel, without a change of *personal* condition. There is a "fitness of things" in this world, talked of a long time ago, and although many people now-a-days strive hard to forget it, 'tis true as ever.

A Visit to London Gardens, &c.—It will do for noblemen in England, who enjoy the income of thirty or a hundred thousand laborers a year, or of societies patronized by the wealth and the money of such noblemen, to enjoy in the splendor and magnificence of their fruits and plants under glass and walls, what the hutless *sans culotte* of southern Europe may take at his ease, in the open air. Yet it is a redeeming trait in these wanton expenditures, that great improvements are constantly making in the correct cultivation of our "open" fruits, from which we may draw much information. "Seven hundred varieties of pears" in cultivation, and fifty only of which are good! In these we have here named five autumn and five winter pears, which are *best*. But are we *certain* that even more than the Louise Bonne de Jersey, and Beurre Bosc of the former, and Glout Morceau and Winter Nelis of the latter, are worth cultivating *here*? The sooner we narrow down our selections of *all* fruits to a *succession* of small variety, in their proper seasons, and those the very *best for the locality* in which they are cultivated, in *all* our fruits, the sooner we shall be rid of much trouble of body, and vexation of spirit, as well as expense of purse.

An old Digger's Practical Hints to Amateurs.—True, every word of it. Read it again. I cannot add a word to its importance.

Mr. Rivers on the Pear.—A capital article, and a subject on which very much is yet to be learned in America. We are but beginners in true pear culture; and not until we drive the miserable "Windsor," "Sugar" and "Bell" pears out of our markets, and supply their place with the *really* good pears, which we can just as easily grow as them, can we date much *true* progress. Of "root pruning" in *extensive* pear culture, I have my doubts. Will it pay cost in this country? Let us have the narrative of our own experience before we too rapidly adopt it. The details of such practice as Mr. Rivers' is always valuable, and the more of such information spread before the American public the better.

Experience in Orchard Culture.—I am very glad to know that Mr. Allen has had the courage to go so vigorously into fruit in a district of country where it is so much needed. Why is it that in localities, often the most favorable for certain productions, there is so little attention paid to them? I am credibly informed that scarcely a good pear, or a really good fresh peach is to be found in the Buffalo markets. And yet I know, from personal observation, that the country around that city will produce both those fruits in great perfection. What beautiful fruit grows almost spontaneously about Lundy's-lane, on the Canada side of Niagara Falls. Peach trees now in full bearing, forty years old, as they told me, and eight or ten inches in diameter of trunk, as I saw! Why should not Grand Island with its thousands of acres of land, a part of which, I learn, is free and open soil, produce any quantity of choice peaches annually? I am glad that Mr. A. is so particular in describing latitudes, elevations, and soils. These are indispensible in knowing what we are to do in fruit culture. When he gets further along I hope we shall hear more of his "experience," and until then, wish him all desirable prosperity in his labors. I would like to know a little more about the virtue of that "iron ore" Mr. A. speaks of as affecting the pear blight. Will no one else notice it?

This is enough for once. The remainder of your number, "Foreign and Domestic Notes," carry their own commentaries. Should the foregoing please you, I will promise to continue my notes for a limited time, at least. Yours truly, *Jefries.*

....

Pomological Nomenclature.—*Mr. Downing*—As you are one of a Standing Committee, to whose charge the pomological convention of last year entrusted all matters particularly appertaining to fruits, I take the liberty to suggest, for your consideration, a reform in the nomenclature, much needed, I think; by which the names of foreign varieties shall be reduced to a level with the comprehensions and lingual capabilities of those who do their cultivating in the fields, and not in the closet. The great unlearned portion of fruit-growers and consumers of the country have had scant opportunities to acquire the necessary skill to execute those outlandish contortions of tongue and countenance, under which is concealed the identity of many of the fruits growing plenti-

fully enough in their own fields and gardens. Hence, in the matter of pears, for instance, they either comprehend every variety and description of them, under the everlasting titles of "Sugar Pear," or "Virgaloo," or affix to them names of their own invention, (by which the existing confusion is constantly augmented,) rather than incur the risk of strangulation and ridicule in an attempt to give utterance to the snufflings and gutturals which, under a diversity of modulations, represent the names of most pears of foreign origin. True, there is now and then a customer who is not "put back" any, to speak of, by such impediments; who, either in contempt of everything foreign, or in the bliss of the infallibility acquired in his spelling-lessons at the district school, *talks the thing straight out*. My neighbor, JOHN GREEN, is one of this favored class. He stammers at nothing short of the Russian. Returning once from an exhibition of rare fruits, he brought away a few specimens, duly labelled, with which he proposed to test the knowledge of an amateur fruit-grower, of whose pretensions he felt a little jealous. Withholding the label from one of them, he accordingly asked him its name. The amateur unhesitatingly pronounced it the "*Gloomerso.*" "No sir-ee," says John, triumphantly displaying his label, "it is not the *Gloomér*, either; it's the *Gluowt Morsaow*." And John was sustained by the almost unanimous voice of his neighborhood. Now sir, if "*Glout Morceau*" means anything, why not render it into language spoken by the Democrats of our own land, and let the fruit be known by an appropriate name,—retaining in the books its foreign appellation as the ruling synonym? And so of half the fruits in cultivation. What possible idea would friend Green and his constituents derive from hearing a convention full of well Frenchified Yankee stalk glibly of (I give the pronunciations,) Coorpahnduplah, Draw-door, Begareogro-cure-eye, See-oat-ah, Duke-do-tell-ye, Onfoutprodeeje, Keeltet, Sahngwenoleahshareadhayrout, Bellybun, Sahnpo, Deahprayrooje, and an hundred other sounds equally heathenish and unintelligible. Resolute as he is, I doubt whether he would not turn pale to be told he had swallowed such things; an experiment upon the imagination which I would not recommend a trial of during the prevalence of the cholera.

As the task of modifying a few hundred of these foreign abominations to the capacities of common tongues and understandings, would be somewhat more practicable than to teach some millions to comprehend and pronounce them, and as the evil is one of frequent complaint, and is, in reality, to large numbers even of intelligent persons, a constant source of vexation and annoyance, I most earnestly and respectfully urge upon you to lay the subject before your committee, and to lend the influence of your high authority toward the mitigation of their sufferings, by a speedy correction of the cause. Sincerely sympathising with hem, I am, &c., *J. C. H. Syracuse, 8th August*, 1849.

[There is a great deal of pith in what our correspondent says, and we have very seriously contemplated bringing out an edition of our work on Fruits, with a translation of all foreign standard names of fruits, instead of the foreign names, ourselves. In the nomenclature of natural history, where a dead language is universally used, there is a great and manifest advantage in the use of a language which is the same in all countries; so that if a collection of seeds or plants botanically named, is received from any part of the globe, the names are alike understood and recognized by all botanists, whether Russian, German, French, or English.

But the names of fruits are mostly local names, in modern tongues, and as ninety-nine hundredths of all the large and increasing class of fruit-growers in this country are unfamiliar with any foreign language, it is of course not to be expected that they should always pronounce foreign names of fruits correctly.

We see no reason why all the French names of fruits should not be Anglicised in pomological works; the translation being adopted as the standard name in every country where the fruit is known, and the original foreign name being given as the synonym. Thus, instead of saying Fondante d'Automne, we would say Autumn Melting; and instead of Ananas d'Ete, Summer Pine-apple. This has already been done in many cases; as Belle de Flanders is now always called Flemish Beauty; and Nelis d'Hiver, Winter Nelis. Local names, like *Urbaniste*, would of course be retained, and would receive our common pronunciation, (as no one thinks of calling Paris, Par-e; or Ghent, Gannd.)

This subject is well worthy of serious consideration; for it is clear, that pomology and fruit-growing are destined to be matter of more general attention in the United States than in any other country; and the best nomenclature for us, is one best adapted to the wants of the class for whose daily use it is intended,—a class, not of scholars, but of workers. We shall be glad to gather a more definite idea of the state of public opinion generally on this subject, and hope the fruit conventions will consider it. ED.]

.....

NIGHT BLOOMING CEREUS.—Having a fine plant of the Night Blooming Cereus, which has bloomed a number of times this season, and a friend wishing to see it who could not be present on account of ill health, I tried the experiment of cutting off a flower towards the night it was to open, and putting it into water the same as a boquet. The result was that it opened as well as those on the plant.

One other was cut off towards night, the eve it was to open and carried seven miles with the stem wrapped in wet cotton. This was put into water in the same way, and I afterward learned that it

opened beautifully to the delight of the friends receiving it. Your respectfully, *F. W., Newark. Wayne Co., N. Y., Aug.* 16, 1849.

.....

Burr's New Pine.—*A. J. Downing, Esq.:* In the number of the Horticulturist for August, 1848, in speaking of *Burr's New Pine Strawberry*, you say, "We do not hesitate to pronounce it *one of the best*, and perhaps the very best, American strawberry yet raised." I wish to inquire whether from the experience of the present season, your opinion of last year is confirmed, or what further you are now enabled to say about it, from actual experience; also, what is the best soil for it. I have full confidence in your opinion, upon any subject of this nature; but the public have often been humbugged with new fruits, particularly strawberries, and two years experience is better than one. Is the Bicton Pine to be had at any American garden? Yours respectfully, *A Connecticut Subscriber.*

Our good opinion of Burr's New Pine is unchanged. It is certainly the best flavored American seedling yet raised of good size and productiveness. It is impossible to say yet how it will succeed in different soils and latitudes. But so far as we have heard of its trial it has given the highest satisfaction; at Rochester, N. Y., it has been much praised; Mr. Huntsman of Long Island (see p. 61,) who is a good judge, considers it "the most desirable strawberry in cultivation;" and the fruit committee of the Albany Horticultural Society, who have had fine specimens exhibited for two years past, reported this year "that the further opportunity afforded them to compare Burr's New Pine with other standard varieties, fully confirms them in the opinion expressed at the last exhibition, viz: 'That it is entitled to the first rank, taking into consideration its many desirable qualities.'"

On the other hand we notice that Col. Wilder, at Boston, in his notes in a previous page of this number, fears that it will prove a poor bearer. But the majority of experience, so far, affirms the other way.

The Bicton Pine was imported last spring by Col. Wilder, who is always among the foremost in introducing desirable varieties, but we believe was lost on the way. As it is said to be a fine new *white* berry, we hope it will have a trial here. Ed.

....

The Gordonias.—Sir C. Lyell's "second visit to the United States" contains so much information on the natural history of this country, that it should be in the hands of every one who is fond of the study of nature. It contains many botanical remarks,* though geology is the topic which most delights the author. His observations respecting the delta of the Mississippi, especially regarding the "sunk country" about New Madrid, and the geological inferences he deduces from the effects of the earthquakes of modern date in that region, will interest all readers of intelligence.

In the following the author alludes to the peculiarly small locality of one of our most valuable fall blooming trees, (Gordonia pubescens,) which in dry situations is hardy as far north as Philadelphia, and probably still further. I have one, thirty-five feet high, which scents a large circumference with a fragrance quite as agreeable as the flower of the Magnolia glauca. *J. J. S., Philadelphia.*

"If," says Darwin, "two species of the same genus, and closely allied habits, people the same district, and we can say why only one of them is rare and the other common, what right have we to wonder if the rarer of the two should cease to exist altogether."

"In illustration of this principle, I may refer to two beautiful evergreens flourishing in this part of Georgia, species of Gordonia (or Franklinia of Bartram,) a plant allied to the camellia. One of these I saw everywhere in the swamps near the Altamaha, where it is called the Loblolly Bay, (*Gordonia lasianthus*) forty feet high, and even higher, with dark green leaves, and covered, I am told, in the flowering season, with a profusion of milk-white, fragrant blossoms. This plant has a wide range in the southern states, whereas the other, (Gordonia pubescens) often seen in greenhouses in England, about thirty feet high, is confined, as I am informed by Mr. Cooper, to a very limited area, twenty miles in its greatest length, the same region where Bartram first discovered it, seventy years ago, near Barrington Ferry, on the Altamaha. In no other spot in the whole continent of America has it ever been detected. If we were told that one of these two evergreens was destined in the next 2000 or 3000 years to become extinct, how could we conjecture which of them would endure the longest? We ought to know first whether the area occupied by the one has been diminishing and that of the other increasing, and then which of the two plants has been on the advance. But even then we should require to foresee a countless number of circumstances in the animate and inanimate world affecting the two species, before we could make a probable guess as to their comparative durability. A single frost, more severe than that before alluded to, which cut off the orange trees in Florida after they had lasted a century and a half, might baffle all calculations; or the increase of some foe, a minute parasitic insect perhaps, might entirely alter the conditions on which the existence of these or any other trees, shrubs, or quadrupeds depend."

* See especially in vol. 1, his account of the distinct zones of vegetation on Mount Washington.

.....

Knevett's Giant Raspberry.—I am glad to learn that Knevett's Giant Raspberry proves hardy with you. It is much prized here, as it stands our winters perfectly well, and uniformly bears large crops of fine fruit. *Yours sincerely, M. P. Wilder. Boston, Aug. 11th,* 1849.

.....

Munificent Bequests.—The late Hon Theo-

DORR LYMAN, of Boston, has bequeathed $10,000 to the Massachusetts Horticultural Society. Mr. LYMAN's seat at Brookline, is one of the most beautiful in point of taste in New England, and his previous donations to the Horticultural Society showed how deeply interested he was in its efforts to improve the arts and culture in the Eastern States.

He has, we learn, also bequeathed $50,000 to the State Reform School, and $10,000 to the Boston Farm School.

When we reflect on this wise and steady liberality towards sound and useful institutions for the public good, in the wealthy citizens of Massachusetts, it is not surprising that that state should be so far in advance of most others in good government, intelligence, and prosperity.

.....

FAIRS AND SHOWS.—The New York State Agricultural Fair takes place at Syracuse on the 11th, 12th and 13th, of September. The promological convention will take place directly after the fair.

The New Jersey Horticultural Society holds its annual exhibition at Princeton on the 19th, 20th, and 21st of September.

The New Haven Horticultural Society's exhibition is held on the 25th, 26th, and 27th of September.

We have not received any official notice of the annual shows of the Boston and Philadelphia Horticultural Societies, but presume they both take place the third week in September.

.....

FRUIT PRESERVER.—Having been a subscriber to the Horticulturist from its commencement, and seeing a notice in the same that questions will be answered to those who are subscribers, I take the liberty to ask your opinion of "Kepharts Fruit and Vegetable Preserver." It is now about two years since every agricultural and horticultural publication had a notice of the same, and pronounced it a valuable invention, but of late I do not hear anything further respecting its power to prevent decay, or preserve whatever may be placed within the vault. If it is a humbug I would be glad to know it, for I am now building a dwelling, from which it is easy to have a communication with the vault, (should I put one into my ice house.) An immediate answer by mail will much oblige yours, *J. G. Pease.*

We are quite unable to give the desired information. We only know that Kephart's Fruit Preserver is in constant use in Philadelphia—and that fruits are preserved several weeks after the usual period by it. How well, or how easily, or exactly by what means they are preserved, we know not. Perhaps some obliging correspondent in Philadelphia will give us the necessary facts for publication.

....

SIR—I have in my possession a copy of your "Fruits and Fruit Trees of America," in which you recommend the cultivation of native grapes in open and sunny borders. Now I have a board fence running east and west, about 40 feet long and 8 feet high. But on account of a foot walk on the south side and close to it, it will be impossible to plant vines on this side of it; therefore I wish to inquire if it would be advisable to *plant* them on the north side, and *train* the vines under the fence, and so upon the south side.

By answering these inquiries, you will much oblige your humble and obedient servant, *Edgar M. Woodford, Unionville. West Avon, Ct., Aug. 13th*, 1849.

[It will answer perfectly to plant the roots on the north side, and, bringing the main shoot through, train the vines on the south side. What the grape needs is plenty of light and heat for the leaves—the soil is always warm enough for the roots.]

....

CRITIQUE ON THE AUGUST HORTICULTURIST.

The Leader.—Good. You cannot too strongly impress on us Americans, who go into those subjects of rural improvement altogether too much by fits and starts, the love of *home* life and *home* scenes. We never shall be a truly refined people until we live *somewhere*, and cease spending the chief part of our time in steamboats, rail-cars, hotels, and boarding houses. We too often *thwart* nature in this country, instead of *directing* and *chastening* it. To enjoy country life, we must be *educated* to it. How many of our "fashionable" travellers, think you, *see* the country as they pass through it? Few, and far between, as we all know—and all for lack of *natural taste*, and well directed *early* education.

Pomological Notes from Mississippi.—I like these notes of what people are doing—they are *positive* data, as far as they go, from which we can draw reliable conclusions to govern our own work, so far as we are in *like* circumstances.

Notes on the best Strawberries.—Excellent. Ditto to the last.

Paving to prevent the Curculio.—I am right glad if anything has proved effectual in keeping off the curculio. I wish that every owner of plum trees would pave a few, and send you the result after a year or two of trial. Possibly, however, as you remark, pigs and chickens may answer the purpose as well; but it strikes me that both pig and chicken must be pretty well trained to it before they will eat *green* plumb and apricots. You have probably heard of some fruits being so sour that it would make a pig squeal to eat it! Rooting and scratching the ground, however, I consider is efficacious in giving growth to the tree, if nothing more. I hope to hear more on this subject.

[They devour the insects which come out of the fallen fruits.—ED.]

How to manage Fruit Trees.—Quite correct; but this plan must be confined to small trees only. All large fruit-bearing trees require a space of some feet in height beneath their branches for the circulation of air. Look at the very next article,

where the gooseberry, five feet above the ground, doubles the size of its fruit, and escapes the mildew. Leaves and fruits are great consumers of the atmosphere, and they can't thrive and bear good fruit without it. For proof, examine a closely planted and low branched orchard. The wood and foliage is usually cankered, and the fruit insipid and tasteless. Let the reader bear in mind that *low* branched trees must be at a good distance apart. I like this article the better for its facts. Hanging out the thermometer *is knowing* something, from which conclusions may be drawn. I should like to hear from "Subscriber" again.

The Gooseberry grafted on the Yellow Currant.—Let us have a little more experience in this new method. It may be a valuable mode of cultivating that *equivocal* sort of fruit; and if *people will* eat green gooseberries—for I hardly ever knew any one who liked ripe ones—pray let us have them in as great perfection as possible.

The White Bellefleur Apple.—This article is what I like. Here is investigation and fact—no fancy about it. If all promologists will go thus to work, we shall soon know what is what in our fruits. I doubt, however, whether the white Bellefleur will prove a profitable orchard apple east of the great lakes. For Ohio, and other western states, it will unquestionably prove of value.

Design and Description of an English Cottage.—Are we never to have any *American* cottages? Our climate is unlike European climates, particularly England; and why copy every thing of the house kind, excepting in internal arrangements, from that country. But there are some things about this house, bating the *gimp* and *pasteboard* look of its outside, that I like; particularly its *upper kitchen*; and had it only that other *indispensible* appendage of a really comfortable house, a large family bedroom on the main floor, I should like the interior plan of it right well. Try it again Mr. WHEELER; add on the bedroom; throw the roof into some sort of ship-shape; tack a light veranda on to the front as well, and then you will have quite a sensible house of it. What a wretched bother this filagree work makes when you want to repair a house. Let the owner of one but try it, and he will be satisfied.

Knevett's Giant Raspberry.—Glad to learn that it is so valuable a fruit. Let it be cultivated by all means, and to its greatest extent; for the raspberry is one of our best *small* fruits. Its hardiness is altogether a disideratum in our northern states.

How to make Strawberry Beds.—Capital, as usual. But, my dear "Old Digger," where are we all to get our "sixteen inches of manure" to fill a "three foot trench," or even "eight inches, or a foot" of it for a "two foot trench." No, no. That may do for a rich man with only a few rods of ground, near a large town, or a city. But it won't pay in a "crop." We common folks must get our best grounds, and plow and manure as well as we would for a crop of corn; plant a good distance, say not less than two feet apart, litter the plants well, and they'll do. [We suppose the Old Digger's directions are for a bed or two in the private garden; not for a market garden. ED.] I'm glad you've shown up the "Washington Alpines;" and there are *some other things* that want to be shown up likewise. I recollect paying a man who came peddling his plants round the country, two or three years ago, with a *picture* of them as a sample, and "first rate" certificates from "gentlemen of the highest respectability," some four or five dollars for a few. They all died but one, and last June that bore, after a deal of pains in cultivation and manuring, a poor little *alpine* strawberry about as large as a ground sparrow's egg! and of flavor as contemptible as its size; served me right enough too; I shan't be so caught again. "Digger's" last paragraph is very important. For want of such caution many a beginner has failed in his strawberries, and laid the fault to something else.

A Short Experience, &c.—This is a valuable article, as it shows what *can* be done by extraordinary cultivation, and manure. But, will it pay? I wish Mr. FULLERTON had kept debt and credit account with his berries. However, for those who *can* afford it, the plan is a good one. What do you mean, my dear sir, by "a strong loam," on which Mr. F. raised his berries? Is it a clay loam, or a sandy loam? We like to know all about these things. A clay loam, even stiff, is thought by many the best for strawberries, particularly that which has a decomposition of old wood, sods, and leaves among it. I hope Mr. FULLERTON will go on with his bed, and give the public the results of its cultivation and bearing for another year. *Continued* experiment is what we want. [A strong loam is a loam with a good deal of clay; a light loam, one with a good deal of sand. ED.]

English Shows.—I am very glad that Mr. COLMAN tells the truth to his countrymen about the good, honest fashion, of English women going to the great cattle shows, and looking at their cattle. When will our American ladies think they can look at "the chanting cherubs' without petticoats, and suffer their pianos to stand up without pantaletts on? But they can do some things—they can see Fanny Ellsler dance, and not shrink behind their fans, or bolt the theatre door. We shall mend our manners, probably, as we go along. Mr. C. gives us fine accounts of the incomes of English noblemen, and of their dogs and of their horses; but he does not set down by the side of them the vast incumbrances on many of their estates, which makes their proprietors mere trustees for the "next heir male," nor detail the destitution and misery which exist in the huts and cottages of many of their dependants. There is much in England that is good, and a great deal that is very beautiful, but at vastly too much sacrifice of human comfort and happiness. How

many famishing wretches could be fed and clothed with the bread given to those "splendid" horses, and the meat cut up for those worthless hounds; and how many thousands could be employed in the cultivation of those stately pleasure grounds, so ostentatiously extended! Would not those "parks" waving in broad fields of grain, and dotted with beautiful herds, and vocal with the mirth of jocund laborers be equally pleasant to the eye of a true philanthropist as now? Yes, and abundantly more. There is something in England rotten, as well as in Denmark—and so they will ere long find out. God fend Americans from all such calamity.

The Swan.—Very pretty to read about, but let that end it. A swan is a perfect fool out of water, and in a country like ours, where the streams and ponds are frozen for half the year, a China goose is infinitely better; and they are a nuisance in any well ordered grounds. If you must keep a swan, let it be in a pond inside a conservatory, and then it is in keeping with the other exotics. But if you don't believe it, first invest the money, and the time that I have done in "fancy" water fowl, and you will be wiser in a few years. Most people have "swans" enough in their own geese, and I am quite content that they shall live on such "poetry" alone.

To prevent Potatoe Rot.—I doubt it I have read near a wheel-barrow load of essays and pamphlets on the potatoe disease, and tried all sorts of preventives, and know no more about it than ever. Side by side they grow—some will rot and some will keep. The same neighborhood produces bad, good, and indifferent, with equal cultivation, on the same soils and from the same seed. May not the disease, like the cholera, be partially atmospheric? At all events we know little about it as yet, and I fear that all investigation will be alike unsatisfactory. Plant sound seed, in soil of moderate fertility, dig early, and keep dry, is the best plan I have yet known. *Jeffreys. New York, Aug.* 1849.

[We recognize in "Jeffreys," the pen of a well known writer, and shall be glad to hear from him again. Ed.]

Summer Blooming Exotics—*Sir:* The facility with which the plants of tropical climates are cultivated in this country during the summer months, not unfrequently renders our stoves and greenhouses receptacles for tools and lumber, during this season of floral beauty, instead of being embellished with the choicest productions of the vegetable kingdom. In some establishments, where an attempt has been made to fulfil the design for which these edifices were intended, 'tis not unusual to see plants of discordant habits, and natives often of the very opposite sides of the globe congregated within the limits of a small house, in which the temperature, atmosphere, and mode of treatment are always the same to one plant as to another; hence it is, that if certain tribes of plants are to be cultivated on an extensive scale, and to their greatest perfection, the house must be as much as possible adapted to their nature, and that no plants be introduced amongst them whose general treatment does not correspond with those for which the house is principally set apart. My object, therefore, is to submit to your readers a notice of such plants whose easy culture and unrivaled beauty, with a little care, will give a succession of bloom from May till October, and whose moderate prices at the public nurseries place them within the reach of every amateur.

For this purpose I would merely select the Genera Fuchsia and Geranium, with their numerous varieties of all hues. To keep a succession of flowering plants, it is necessary to strike cuttings as early in the spring and summer as possible; when rooted they will grow rapidly in a cold frame, kept rather close, and shaded occasionally in hot weather. By this simple and easy means, they will be ready to put on the stage when the earlier plants are getting unsightly and out of bloom. Achimenes, Gloxinias, and Gesneras, if grown in a close frame till flowering, and then removed to the green-house, will make a magnificent display, intermixed with the other plants, The graceful and free-flowering *Manetia bicolor*. and nearly all the species of Begonias, if flowered in a stove, are equally well adapted for a mixed green-house during the summer months.

The foregoing plants when flowered and removed to their summer quarters, will all thrive under the same treatment, (except that Achimenes and Gloxinias do best when the pots are placed under a saucer of water.) Heat and light are the two great agents of nature which call organic life into existence, and without which those beautiful colors and striking forms that surround us on every side would have remained inorganic substances. These agents require to be differently adjusted to different tribes of plants when exposed to bright sun, particularly under glass, for the loss of water by plants depends mainly upon the intensity of light to which they are exposed, as the following propositions affirm: 1st. Plants perspire most in bright sun: 2d. They perspire least in weak, diffused light: 3d. In darkness they perspire none at all.

Upon the first axiom is founded the practice of shading; but if this is carried to too great an extent, according to the third proposition the plants become etiolated and die. The second proposition shows the medium in which all plants, which like Fuchsias, Achimenes, etc., naturally grow in the shade, flourish; hence it is that close muslin, strong canvass, or bass mats, so frequently used, are objectionable, as excluding too much light, the plants thereby becoming etiolated, that is, blanched, as already suggested. Canvass of the slightest material is preferable, not only because it preserves the plants from the burning sun, but that it will also admit sufficient of its vivifying rays and light to enable the plants to assimilate their juices. I

am, sir, respectfully yours, *M. C. Newburgh, Aug.*, 1849. ....

A Beginner's Troubles.—I wrote an article, which appeared in the February number of the Horticulturist, giving an outline of *a plan* I had adopted for planting an orchard,—the result, as I thought, of the collected wisdom of the various chapters "on transplanting," and catalogue directions; which plan was submitted rather interrogatively, and with due deference to experience everywhere; and fortunately, I concluded, received the brief endorsement of the editor,—that "we (the editor,) are always glad to hear of such *thorough* orchard planting." But lo! a wise man from Buffalo blows up the whole plan, in the "Genesee Farmer" for April, and declares, with its editor for endorser, that our "deep holes" will not do, and gives *his* plan. What are the ignorant to do when doctors disagree? Nevertheless, I have not taken the trees up, but subsoiled the ground early in the spring; and they are *all* growing finely. [You have not a hard-pan soil, and your Buffalo critic probably has; and what would be best in your soil would be worst in his. Ed.]

Received a quart of Osage Orange seed from Cincinnati the winter of '47–8; submitted it to the frost in an open box of damp quarry sand, planted it the 7th of April, and a portion of the seed—say one-half—vegetated, and made a growth of some two feet. I thought them too small to transplant to where I wished the hedge, and now they have made such a huge growth,—branching out in every direction with new shoots, of more than three feet in length,—that I now scarcely know how to manage them. Can these shoots be used as cuttings? And will they make good plants? [They will make good plants if the cuttings will strike; but we doubt the latter. Ed.]

I obtained a peck of seed from the same place this spring, poured water, heated to a degree scarcely to be borne by the hand, upon the seed, agreeably to the counsel of western cultivators, and allowed it to remain in the water some forty hours, (a rain preventing me planting sooner,) and then planted in good mellow soil; but not one seed ever germinated. All rotted in the ground. Was the seed worthless; or was it immersed too long; or was the water too hot? [The seed received from Arkansas is often spoiled before it arrives; but if not, forty hours soaking would be likely to destroy its vitality. Ed.]

I purchased a lot of fine rooted plants, of the large Red and White Dutch Currant, from one of the New-York nurseries, desiring to *have the best* in cultivation. They have grown well, and borne fruit; and prove to be identical with those cultivated in my father's garden from my childhood. Have also procured Knight's Large and Sweet Red, Champagne, and May's Victoria, at high prices; and doubt much, from the fruit they have borne, whether they will prove at all superior to the Dutch. [The *true* Dutch currants are very much finer and larger than the common sorts. May's Victoria is also a distinct and excellent sort. Ed.]

As long as I can remember, there was a fine bed of asparagus in my father's garden; but I wanted better, and sent off to Flushing for that "*Giant*" kind, which now, if I were to name it, would call "Lilliputian asparagus;" for it is trifling, compared with our own old kind.

I sent five hundred miles for Hovey's and other strawberry plants. Black Prince, and some others, proved true and done well. Hovey, no better than the common scarlets of our hills; and shall dig them all under this fall. [We think it more than probable that you really obtained neither Giant asparagus or Hovey's strawberry. Ed.]

At a high price, I procured twenty-four varieties of imported gooseberry plants, of bearing age. They are *all* more or less covered with mildew, and large berries falling prematurely to the ground, while a variety considerably disseminated here, and known as the "Cluster" gooseberry, is loaded down with ropes of medium sized, light red berries,—even plants numbering but a second summer's growth; and *never*, so far as I know, is it affected with mildew. This kind I think is entirely identical with the prolific gooseberry bush, described by Dr. Boswell, in the Horticulturist of January, 1848,—having received cuttings myself of that bush, from Dr. Harvey, its proprietor, in the spring of 1848, which fruited finely this season.

I obtained the Ohio Everbearing raspberry from Kentucky. It grew, and bore finely one crop, but have seen nothing of its "Everbearing" propensities, but appears entirely similar to some of our native kinds. [It is precisely like the common "black-cap;" but in a cool, deep, clay soil, it bears abundant crops in October. Ed.]

I have had the true Red Antwerp, Franconia, and Fastolff, in bearing this season. The two former are larger, but not superior in flavor to some of our native sorts, cultivated in our garden; but the last is decidedly first rate in all respects. Doubtful whether they will withstand our cold winters. We have covered ours slightly with earth, bending down the canes, which proved ample protection.

To finish off, allow me to propound a query or two. Should the Early Richmond, or common Kentish cherry, be propagated from seed, suckers, or worked upon the Mazzard stock? With others, some time back, I had some doubts whether the seed of the Kentish would grow, as it is never seen growing wild, only as a sucker from others; and having failed several times in efforts to get the seed to grow. But this spring I planted some, which had been boxed in sand from the day they were taken from the tree, and they have come up and grown quite well. Will the size and quality of the fruit be improved by raising from seed? [Raise by seed, by all means; but as you cannot be sure that they will always be

early or late Morellos, you may work them afterwards, if you choose, with known sorts. Ed.]

Wise men, who claim to know, have written much upon the movements of the sap, and that *new wood is only* deposited in its downward course. If this thery be sound, is it not a sufficient reason for adapting "reversed shield budding," making the horizontal, or "crossent" at the bottom, instead of the top of the upright cut in all budding operations? Further, if two strings are important in budding plums, and other difficult fruits, is not this method still more necessary?—for when the upper string is removed, the lower one still binds the horizontal, and also upright cut in part, allowing free course to the sap in its downward flow to the bud, and a better opportunity, therefore, for the formation of new wood, and, consequently, a speedier and better union of the bud and stock. Besides, as the foot-stalk of the leaf is serviceable in enabling the operator to insert his bud with speed and neatness, will it not be much easier and safer to force the bud *up* than *down*, by taking hold of the foot-stalk?

I practice budding very little in any other way, and think I can perform the operation much faster, and with more certainty of success.

One matter further. Much is said about transplanting evergreens. I have no theory, and but little practical knowledge. Still, I transplanted a few very nice White Pines from a neighboring forest the last of March, and some quite large Hemlocks, from the "banks of our Brandywine," the last of May, with entire success; both periods being very damp rainy weather; since which, however, it has been, and is now, unusually dry. *J. Chester co., Pa., Aug.* 3, 1849.

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A New Yellow Climbing Rose—*Dear Sir*: As you have repeatedly requested that notices of new and rare plants, &c., should be forwarded to you, I have taken the liberty to bring to your notice the following magnificent fragrant double yellow running Rose, raised by Hon. James Matthews, of Coshocton, Ohio. I extract from his letter of June 7th, some account of this valuable acquisition to the Rose family:

"I would be glad if you could be with me a week hence; as by that time I will have some roses in bloom on a seedling of my own raising. It bloomed with me last year for the first time, and is truly *not* a common or ordinary variety of Rose; but a very *splendid* new variety. You know I have seen some of the best roses in cultivation, and I assure you I have not seen its superior, either when partly or fully expanded. As I fear you will not be here at the afore-mentioned time, I will attempt to give you some idea of its characteristics by description—though I am not much versed in such matters.

First, its history. Sometime in January, 1844, the Hon. A. P. Stone and Lady, of Columbus, Ohio, together with Mrs. Matthews and myself, on a remarkably mild day for that season of the year, visited Mount Vernon, the former residence of Washington, and while wandering through the garden, I plucked quite a number of seed vessels from the great variety of Bourbon, Noisette, and Tea Roses which are there growing. These, on my return home in the spring, I planted, but not knowing how to manage them, but few vegetated. Of those that did grow, I gave away four the following season and retained two; one of the latter presents a very common appearance, and has never as yet bloomed; the other, which was a favorite from the first, showed great signs of being a very remarkable grower, and is now fully proved to be of vigorous and healthy habit. This plant has, for at least two seasons, thrown up shoots 16 to 18 feet in height. It is, I think, of the Noisette character, and for comparison in growth and appearance, more nearly resembles the *Lamarque*, than any other rose I am acquainted with, but is a much more vigorous grower; the leaves much larger, decidedly more ruddy and dark in hue, and very glossy and handsome; young wood of a very reddish cast, full of short rugged thorns, similar to Lamarque, but much more numerous; old wood, large, coarse and thorny; the roses *very large* and *very double*, and in colour a light, pure yellow, much deeper yellow than Devoniensis, perhaps, indeed, more the colour of *La Pactole* than any other I have seen, but *quite twice as large* as the latter named variety; the bud is shaped like the Lamarque, but is larger; the rose when expanded is also much larger. It is perfectly tea-scented, quite as fragrant as *Devoniensis*, and more fragrant than any other variety with which I am acquainted. These are the substance of its good qualities. It is tender, (like the Noisette) and will, if exposed to the winter, freeze, without protection. I laid it down last winter, and covered it slightly with earth, and as far as protected in this manner, it is perfectly sound, and from the young shoots coming out from the *old* stock, the roses are produced. I do not as yet know whether it will be 'perpetual.' Since this rose bloomed last year, (it then had two flowers only,) it has been my determination, should it prove a valuable acquisition to the rose family, (as I then thought and still think it may) to present it to you as my most intimate floricultural friend, and by you to propagate and disseminate it in whatever manner you please. The original plant has now fourteen good healthy buds, all of which will be expanded within a week or ten days. I have never given a cutting from it and will not do so if it will benefit you. These roses hang on in their perfection three days after expanded."

Under date of June 20th, I received the following from Mr. Matthews in reply to some inquiries of mine:—

"In haste, I put up and directed to you according to your desires, a few branches and *one* rose of my seedling. This is the last of the blossoms, and of course inferior to the average. I also send you a shoot of last year's growth, two or three

shoots that have just borne roses, and a specimen of the growth of the present season. This rose has been the admiration of all who have seen it, being greatly preferred to all of my pretty large collection; and it fully realizes my most sanguine expectations. It is in my opinion one hundred per cent better than Lamarque."

With the rose and specimens of wood and growth before me, you must allow me to give you my opinion of this truly fine rose. *Chromatella* and *Solfaterre* are, I might say, pigmies in growth to this seedling. I have at this time a fine plant of Solfaterre and also of Chromatella in bloom, and I have made a careful comparison. In growth, flower and leaf, they are greatly inferior. This seedling flower is very much *larger* and much more double—the leaf far finer and half as large again. Chromatella is a better grower than Solfaterre, but bears no comparison with the seedling; the leaf of Chromatella is smaller and not so deep a green; that of Solfaterre is also much lighter in colour; the bloom of Chromatella is not so large as the seedling, although this was the poorest blossom on the seedling. The old growth of the seedling resembles more nearly the Beauty of Prairies, as regards thickness, thorns, bearing spurs, &c., than any rose I have in my collection; the under surface of the new leaves is very red. upper surface handsomely tinged with red; old leaves of the very deepest green. The cuttings of this season's growth sent me, are three feet long, and which I should judge to be only part of the growth of this spring; in thickness a little greater than a common pipe stem. The roses bloom at the termination of the first growth of the winter buds, and were in clusters of three and four upon the branches sent me. I send you one of the largest leaves upon this season's growth; the terminal leaves all have two small leaves (or stipules) at the base, which neither Lamarque, Solfaterre nor Chromatella possesses. As you may think that the *largest* leaf is not a *fair* criterion to judge from, I send you one of common size, and send it enclosed so that you may see the colour, if it does not dry up before you receive this. I also send one of the smallest leaves, all from the new growth of this spring's shoots sent me. As to its habit, think of a rose putting up shoots 16 to 18 feet in a season, the flower double, yellow and fragrant as any Tea Rose. Is it not an acquisition to the rose family? This rose will hereafter be known and designated by the name of "Augusta," in compliment to Mrs. MATTHEWS and her second daughter. Yours, with respect. *A. Fahnestock. Lancaster, Ohio, July.* 1849.

[This, judging from the foliage and the description of the flowers, is no doubt a valuable aquisition. ED.]

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OSAGE ORANGE.—I wish to make a few inquiries, respecting the Osage Orange, as a hedge plant.

First. You say that it is hardy wherever the Isabella grapes will mature in the open air. Will it also mature its seed in a location where the thermometer never falls more than four degrees below zero? (which is the case here, near the foot of Seneca lake.)

Secondly. Will it throw up distant suckers from the root?

Thirdly. I have understood that its wood is as durable as the Yellow Locust; and if so, why may it not be cultivated for its timber alone, in place of the Locust, which is injured by the borer?

Fourthly. In a location where both thrive equally well, which would you prefer, on the whole, for farm fencing purposes, the Osage Orange or the Buckthorn?

By answering the above queries, in the next number of the Horticulturist, you will much oblige several *Farmers*.

ANSWERS.—We have never known the seed of the Osage Orange to ripen north of New-York; but it is not unlikely that it may ripen in the mild climate of Seneca lake. Our correspondent is perhaps not aware that this tree, like many other forest trees, is *diœcious;* and hence, the male and female trees must stand near each other to get perfect seeds, though the fruit is freely produced by the female trees, even if growing alone.

It cannot be called a tree which *suckers*, in the common meaning of the term; but when the hedge stands in tilled land, where the roots are constantly broken by the plough, young shoots from the root will occasionally spring up—not so much as to become objectionable.

The wood is quite elastic, and was formerly much used by the Indians of Red river for bows. It is also said to be durable; but we have no data for judging of its value, as a timber tree at the north.

The Buckthorn is the hardiest and "toughest" hedge plant we know,—growing in all soils and all exposures, and making a hedge with less care than almost any other plant; but unless well and regularly sheared, it is not so good a barrier as the Osage Orange, for the latter is particularly thorny. Both have their advantages. We should recommend the Buckthorn for cold latitudes, and the Osage Orange for warm ones. ED.

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LEAF-BLIGHT—*Dear Sir:* A communication, and a few observations from you, in the last number of the Horticulturist, on a subject to which I have given some attention for the last three years, viz., the leaf-blight on the pear tree, have induced me to ride into the country and examine the Oswego Beurré, and other bearing trees, on which I have observed this leaf-blight increasing for several years. I send you several leaves from the original Oswego Beurré, that bears this year a full crop, as it invariably has for about twenty years. You will be able to judge whether our leaf-blight is identical with that on the leaves sent you by Mr. HANCOCK. These leaves are about an average, as indicating the extent of the

blight on the entire foliage of this tree. Many other varieties, after long cultivation, are found to be affected in a similar manner here by the leaf-blight. Those that have the least culture are the most affected by this blight, which would go to sustain your position, that "It is undoubtedly owing to a want of specific food in the soil." But my observations here do not sustain the conjecture, that the spots on the fruit are a necessary consequence of the disease in the leaves. I find, and have found for the last three years here, that the Oswego Beurré, and many other varieties, have been more or less effected by the leaf-blight, while the fruit was entirely free from fungus or other spots or cracks.

The desiderata in relation to this leaf-blight in the pear, are its causes, consequences, and remedies. On these points may we hear more from you and your correspondents. On one point, I think my testimony may be given now; which is, that this leaf-blight, on a particular tree or branch of a tree, (for it often attacks some branches more than others,) has the effect to deteriorate the fruit of that particular tree or branch, both in size and quality. Is not this one great cause of many fine pears varying so much in quality?

I shall, "Deovolente," soon give you the result of my observations for several years in this locality, destined to be *the* great pear section of the states. Respectfully yours, *J. W. P. Allen. Oswego, N. Y., August* 15, 1849.

[This is the same leaf-blight known in this part of the country. It first makes its appearance on a few leaves, then gradually extends, and finally attacks the fruit. Whether it is a fungus or a blight, we shall perhaps be better able to speak after some microscopic examinations, now being made. But we are satisfied that its appearance indicates feebleness in the vital action of the tree; and we believe plenty of food and deep soil will prevent it. Ed.]

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Mulching Gooseberries.—The English gooseberry has always hitherto mildewed here; and I have been familiar with bushes of the best sorts for many years, without ever being able to gather any perfect fruit.

I have lately "mulched" some old bushes, which had heretofore borne this worthless fruit. I covered the surface of the ground under them a foot deep with wet, half rotten straw, extending this mulching as far as the branches grow.

Imagine my delight at finding the gooseberries on the bushes so mulched now ripening off finely,—the fruit twice as large as I have ever seen it before, and quite fair and free from mildew. Yours, *James C. Reed. Dalton, Ohio, July* 2, 1849.

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The Gold Mines of Ohio.—While so much is said about land in the world, and the evils of having too much, and the misery of many who have none, it may be an interesting problem to test the *capacity of an acre of ground* in Ohio to support man or beast. In the Agricultural Report, made to the last legislature, there are some curious facts on this head. Some of the county agricultural societies distributed premiums to those who raised the largest crops. The following are the largest crops of corn reported. The measurement is of shelled corn:

Guernsey county—	3 acres,....	345	bush.	9	qts.
Hamilton "	—1 acre, ...	159	"		
Harrison "	—3 acres,....	392	"	30	"
Mahoning "	—2 acres,....	202	"	7¼	"
Union "	—1 acre, ...	126	"	16	"
Total, ...	10	1,175	"	28¼	
Average per acre,.....		117	"	10	

Let us now look into the price of cultivation on this land; that will show the difference between good and bad cultivation.

In the county of Harrison, the cost of cultivating three acres of land, (not the same as above) was $19.37½, including the gathering of the crop. This the reader will say is enormous, being $6.45 per acre. But let us see the result. The three acres produced 331¼ bushels, which sold for 26 cents per bushel, a moderate price.

The account then stood thus:

Price of crop,.....	82 87½
Cost of cultivation, &c.,.....	$19 37½
Nett profit,.....	$63 50

This land then brought $21.50 per acre for a single crop! Or, take this view of it: It produced money enough to buy sixteen acres of government land, as good as itself! This is fairly and truly the profit of sixteen fold the original capital in a single crop!

Such crops are not common, but it is common to find fields of corn, with eighty bushels to an acre. This is a very common crop for bottom lands. The average crop of Indian corn in several counties in Ohio were—

Clermont,.....	45	bushels per acre.
Coshocton, ...	50	" "
Franklin, ...	50	" "
Darke, ...	50	" "
Greene, ...	50	" "
Guernsey, ...	45	" "
Miami, ...	65	" "
Richland, ...	35	" "
Ross, ...	45	" "
Seneca, ...	40	" "
Warren, ...	50	" "
Wayne, ...	35	" "
Average of 12 counties,	46¾	

This includes upland as well as lowland. These counties may be a little above the average of the state. Taking all the arable land in Ohio, cultivated in Indian corn, in the year 1848, and the average of the whole is not less than forty bushels per acre.

The average price of Indian corn, when raised, has been twenty-five cents per bushel. The ave-

rage value of the average crop is $10 per acre. Estimating every hour's labor at its value in coin, supposing that the farmer or proprietor either does not labor, or is paid for his labor at a fair estimate, the average cost of cultivation is $5 per acre. Deducting this from the total value of the crop, and there remains a nett profit on the land of $5 per acre!

But the average value of corn land in Ohio, in the best counties, is not more than $25 per acre. The result is that the nett profit or rental of corn land in Ohio, actually cultivated, is full 20 per cent. on the capital invested! But this is not all. The man, who actually himself farms his own land, on the Miami, or the Scioto (for example,) makes much more than this,—probably 30 and at least 25 per cent. on his capital, where the farm is not too large. In the first place he works himself, and receives the price of his own labor, instead of paying it out. In the next place he does not sell his corn, but feeds it to his pigs and cattle. In the last process he enriches his land, and gets more for his corn.

That the above results are accurate may be tested in another way. When land is rented, the tenant in Ohio does not, like one in Europe, expect merely to be paid for cultivation; but, on the contrary, expects to be paid a handsome part of the crops beside; or, in other words, to receive enough of the crops to answer both purposes. He expects, in one word, to progress as fast in accumulation as his landlord. As he puts in labor, and his landlord land into the common stock, or if they pay money, to estimate his labor at half the profits.

Now there are many lands on the great Miami, which rent from $4 to $6 per acre, money rent, and on the Scioto from $2 to $4. This may be estimated therefore, about half the nett profits of these lands. Or, in other words, $10 on the best lands of the Miami, and $6.50 of the Scioto, may be taken as the correct profit on the capital in lands, if the labor only of cultivation were paid for. There is a third mode of testing this very fact. We know that the lands there planted produce from 70 to 80 bushels per acre, which, at 25 cents per bushel, would be from $17 to $20 for the crop; the nett profits of which would be as we have above shown by the results.

Now, where is there any mercantile business, that will pay from year to year 20 per cent. *nett profit?* Where are there any gold mines that will pay it ten years successively?—*Cin. Atlas.*

.....

Fastolff Raspberry—*Mr. Downing:* I have a single plant of this celebrated raspberry, which has borne *four quarts of berries* this season. More strictly, perhaps, I ought to say a single stool or bunch of plants; for though there was but one plant when I planted it, three years ago, it is now a large tuft or bunch of roots, all cemented together at the base. The whole plant is six feet high, and has been loaded with the largest and most magnificent crop of raspberries I have ever beheld,—many of the berries measuring three and a half inches in circumference.

This is not to be taken, I am bound to say, as a fair specimen of the growth or product of this variety; though, after cultivating the best other sorts, I think it both the largest and the most productive.

In fact, this plant is only a *pet*, having had unusual care. It was planted in a bed, made 3 feet deep and 6 feet across, into which I put a bushel of poudrette. It has also had an occasional soaking with soap-suds. I mention it to show your amateur readers what may de done by extra care. Your obedient servant, *R. Boston, Mass., July* 20, 1849.

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ANSWERS TO CORRESPONDENTS.

Peach Trees.—*Andrews*, (Baltimore.) The specimens you have sent us prove that your trees have the *yellows*. You had better dig them all up at once, burn them, and send to some nursery where the yellows is not known and get a stock of healthy trees. Some nurserymen pay no attention to getting the stones of healthy trees for stocks, and therefore all trees which they bud on, inherit the yellows; and though it may not appear so long as the tree remains in the nursery, it is certain to do so after the trees have borne a couple of crops. There is no reason why a peach tree should not continue in good health and have good crops for 25 years, if it has a healthy constitution and is properly pruned.

Root-pruning.—*A Hartford Subscriber*. Your elm, the roots of which interfere with the culture of the ground under it, may be root-pruned, but the roots cannot be shortened more than a couple of feet without impairing the luxuriance of the tree. Lime should never be applied except after it has been slacked so long as to lose its caustic qualities.

Pruning Roses.—*A Novice*, (Trenton, N. J.) The Lady Banks rose produces its flower on one year old wood. Your plant, therefore, did not bloom, because you cut off all the shoots that would have bloomed when you pruned it early in the spring. You should prune it at mid-summer; it will then bloom abundantly.

The same remark applies to *Felicete Perpetuelle*, and one or two other climbing roses.

Summer-grown Buds.—*A. P.*, (Cincinnati.) We do not think well of the practice of allowing the buds to put out shoots the same season they are inserted. Such growth is generally feeble and spongy. It is much better to leave the top on the stock after budding it, till the following spring. The bud will then remain dormant till spring, when it will make a sound and healthy growth.

Tomatoes.—*A New Subscriber*, (Plymouth.) If you cut off the tops of your tomatoe plants (yet

full of fruit,) close to the ground, before you have any frost, and lay them in an empty hot-bed frame, cover them with the glass, and keep them closely covered day and night, the fruit will gradually ripen for six weeks, and prove excellent.

Sickly Trees.—*W. Jones*, (New-York.) Your orange and lemon trees, from your account of them, are suffering from unsuitable soil. Turn them out, shake off all the loose earth, and re-pot them in a mixture (equal parts,) of *burnt sods* and decomposed manure; (that from an old hot-bed will answer.)

Importing Plants.—*A Young Nurseryman.* You will seldom succeed in importing strawberries, or any plants which have not hard wood, in the spring. If you will order them sent out in October, on the other hand, they will seldom fail.

New Shrubs.—*A. R.*, (Philadelphia.) The two best new shrubs are *Wiegela rosea* and the double Japan spirea; both perfectly hardy in our garden, and both very handsome. The blossoms of the former are of the size of a shilling, and open of a delicate apple blossom colour, changing to a deep pink or rose. The finest, most massy looking shrub, for your purpose, is the Tartarian upright Honeysuckle.

Packing Fruit.—*F. W.* Pack your fruit in cotton; and, if very delicate, wrap tissue paper about each specimen first. Nothing spoils the bloom, beauty, and flavor of fine fruit so much as bad packing; and we have had many a box of choice specimens so spoiled that we could give no account of it, simply from its having been packed in *saw-dust*.

*** Correspondents, who are subscribers, will receive answers to any queries through this channel, unless in special cases when otherwise requested; and all queries requiring an early answer, must be received before the middle of the month.

PENNSYLVANIA HORTICULTURAL SOCIETY.

The stated meeting of this association was held in the Chinese Saloon on Tuesday evening, August 21, 1849—the President in the chair. The display presented many attractions, and in the department of fruits was very rich,—especially so in grapes and nectarines. There was one collection of grapes from the Institution of the Ladies of the Sacred Heart, W. Westcott, gardener, consisting of Black Hamburgh, White Frontignan, and White Chasselas; the three bunches of Hamburgh each respectively weighing 2 lbs. 6½ ounces, 2 lbs. 6 oz., and 2 lbs,—the berries being of very large size. Another collection by H. W. S. Cleveland, Burlington, of the Black Hamburgh, and White Sweetwater, were very weighty and of fine size. A bunch of White Syrian, from Judge Kane's green-house, weighed 2½ lbs. A large bunch of fully ripe Isabella, with large berries, was shown by A. L. Felten. The early Violet nectarines, by Joshua Longstreth's gardener, were beautiful in appearance and size; and the collection of the President consisted of the New White, Vermash, Elruge, Old White and Downton varieties; one fruit of the last named measured eight inches in circumference.

A basket of Washington Bolmar plums were very large and delicious, exhibited by Robert Johnson; and a number of dishes of other varieties of less merit. There were also Bartlett, St. Julienne pears, peaches, apples and Corrullian cherries; and several tables of plants in flower, of great attraction, and one of indigenous, of much interest; and a number of designs and bouquets, of handsome construction and choice flowers.

The committees reported the following awards: For the best hot-house plants, to James Bisset, gardener to James Dundas; for the second best hot-house plants, to B. Daniels, gardener to C. Cope. For the best green-house plants, to Robert Buist; for the second best green-house plants, to B. Daniels. For the best plants in pots, to Maurice Finn, gardener to John Lambert; for the second best plants in pots, to B. Daniels; for the third best, to David Scott, gardener to Fred'k Lennig. For the best indigenous plants, to Robert Kilvington For the best design of cut flowers, to Maurice Finn; for the second best design, to James Bisset. For the best indigenous bouquet, to R Kilvington. For the best basket of cut flowers, to Robert Kilvington; for the second best basket, to Maurice Finn. For the best basket of indigenous flowers, to Robert Kilvington

For the best three bunches of grapes—black variety, the Black Hamburgh, to Wm. Westcott; for the second best—the Black Hamburgh, to H. W. S. Cleveland For the best white variety—the White Chasselas, to Wm. Westcott; for the second best—the White Sweetwater, to H. W. S. Cleveland. For the best nectarines—the Early Violet, to P. Burke, gardener to Joshua Longstreth; for the second best—the Downton, to Ben Daniels. For the best plums—the Washington, to Robert Johnson; for the second best—the Washington, to Mrs. Jno. B. Smith; for the third best—Green Gage, to the same. For the best peaches, to John Perkins; for the second best, to Isaac B Baxter; for the third best, to the same. For the best pears—Julienne, to Tho Hancock; for the second best—same kind, to John Perkins; for the third best—the Bartlett, to H. W. S. Cleveland. For the best apples—Summer Pearmain, to John Perkins; for the second best—Strawberry, to Tho. Hancock; for the third best—the Maiden's Blush, to John Perkins.

The committee particularly notice some extraordinary fine Isabella grapes, by A. L. Felten, grown in the open air,—the berries rivalling in size the Black Hamburgh, for which they award a special premium of one dollar. They also notice a large bunch of white Syrian grape, from the garden of Judge Kane.

For the best display, and the second best display of vegetables, by market gardeners, to Anthony Felten; for the best display by amateurs, to Ben Daniels; for the second best display by amateurs, to Maurice Finn.

A circular, from the North American Pomological Convention, was received by Dr. Brinckle, and read, conveying an invitation to the society, to send delegates to attend the convention to be held at Syracuse.

On motion, ordered, that the invitation be accepted, and delegates be appointed. The President appointed Messrs. Dr. W. D Brinckle, E. W. Keyser, Rob't Buist, Tho. Hancock and T. P. James

The corresponding secretary communicated an invitation from the New-Jersey State Horticultural Society, inviting this society to send delegates to their autumnal exhibition.

The President announced that J. R. Ingersoll had presented the following very valuable books, and large map: Report of the Patent Office U. S., 1849; New-Mexico and California, by Emory, Abert, Cooke and Johnston; and Map of the Military Reconnoisance, by Col. W. H. Emory, under Gen. Kearny.

On motion of library committee, ordered, that the thanks of the society be tendered to the donor, and the books be placed in the library.

The secretary announced the present of a valuable volume, the Transactions of the New-York State Agricultural Society, through B. P. Johnson, secretary.

On motion of the library committee, ordered, that the thanks of the society be tendered for the valuable prize, and the volume placed in the library.

Thos. P. James,
Rec. Secretary.

MASSACHUSETTS HORTICULTURAL SOCIETY.

BUSINESS MEETINGS.

August 4, 1849.—President SAMUEL WALKER in the chair.

On motion of Mr. C. M. HOVEY, the following votes were passed:

Voted, That the members of the Mass. Horticultural Society having learned, with feelings of the deepest regret, of the death of their respected fellow citizen, the Hon. THEODORE LYMAN, an honorary member of the association, and the munificent donor of a liberal sum for the promotion of the objects of the society, therefore

Voted, That in the sudden death of Mr. LYMAN, the community have sustained a severe loss, and the Massachusetts Horticultural Society one of its most ardent and enthusiastic friends. Deeply interested in all that pertains to the cultivation of the earth, and endowed with a true taste for landscape beauty, his example, as evinced in the arrangement of his own elegant grounds, had a high influence in disseminating a love for horticultural pursuits.

Voted, That the society sympathise with the family of Mr. LYMAN, in their afflicting bereavement, and respectfully tender their condolence.

Voted, That the above be placed upon the society's records, and a copy of the same be transmitted to the family of Mr. LYMAN, by the Corresponding Secretary.

The following gentlemen were elected members of the society:—Peter Smith, Andover; George T. Blake, Henry B. Stanwood, Boston; H Schimning, Watertown; Henry Poor, John P. Goddard, Boston

August 18, 1849.—President SAMUEL WALKER in the chair.

A copy of the 8th volume of the "Transactions of the N. Y. State Agricultural Society," was received, and the thanks of the society were voted.

Voted That the use of the society's library room be granted to the trustees of the Norfolk Agricultural Society every Saturday, from 9 till 11 o'clock, A. M, until the annual exhibition

EDWARD C. R. WALKER,
Recording Secretary.

Exhibition of Saturday, August 11, 1849.

FLOWERS.—From M. P. Wilder, a fine display of perpetual Roses, Phloxes and Lilium Japonicum.

From Parker Barnes. Gladiolus floribundus, G. Gandivensis, Dahlia Privatere, fine, Phloxes, Sempervivum, Hollyhocks, Veronicas, Didiscus, &c.

From J. Breck & Co., Hollyhocks, fine, Phloxes, Bignonia, Rudbeckia, Ditsia, Balsams, fine specimens of the 2d blooming of Wisteria consiquana.

From John Hovey, Bouquets and Balsams.

From A. Bowditch, Bouquets

From James Nugent, Balsams, Phloxes, Pavonia, Lilium japonicum, and Bouquets. &c.

From H. B. Crooker, by Thomas Needham, Balsams very fine, Phloxes, Liliums and Dahlias.

From Hovey & Co., Phloxes and Gladiolus floribundus, G. Gandivensis.

GRATUITIES RECOMMENDED.—To J. Breck & Co., Cut Flowers, ... $1
To Parker Barnes, Cut Flowers, ... 1
To M P. Wilder, Phloxes and Roses, ... 2
To James Nugent. Bouquets, ... 1
To John Hovey, Bouquets, ... 1
To A. Bowditch, Bouquets, ... 1
To Messrs Winship, Mantel Bouquets, ... 1

DAVID HAGGERSTON, Chairman.

PRIZES AWARDED.—Balsams, for the best display:—To Thomas Needham, 1st prize, ... $3
2d best display, James Nugent, ... 2
3d do. do., to Breck & Co, ... 2

PARKER BARNES.

FRUITS.—From E. M. Richards, Melon, Christiana.

From Francis Dana, Seedling Plum, from C. Stearns.

From B. V. French, Apples, Currants, red and white, cultivated Blackberries, very fine.

From C. E. Grant, Blackberries, very fine.

From A. D. Weld, Pears, Sugar Top.

From J. F. Allen, Grapes, Whalley Hall Seedling, Peaches, very fine, Nectarines.

From Azel Bowditch, Grapes, Black Hamburgh.

From A. H. Ernst, Cincinnati Apples, Summer Queen.

From Otis Johnson, Grapes, White Muscat of Alexandria, very fine, Black Hamburgh, White Frontignan, fine, Zinfindal, fine, Blackberries, very fine, Pears, Citron des Carmes, Figs, Black Fig of St. Michaels.

From James Nugent, Grapes, White Sweetwater and Black Hamburgh.

From Messrs. Hovey & Co., Grapes, Black Hamburgh, August Muscat, Macready Early White, Muscat Jesus, Muscat of Alexandria, very fine, White Frontignan, very fine, Chasselas of Fontainbleau, Red Chasselas. Muscat Blanc Hatif, Grizzly Frontignan, very fine, Chasselas Bar Sur Aube, Peaches, Jacques Superior.

From Galen Merriam. Blackberries, very fine.

From H. R. Morse, Apricots, Moor Park, very fine.

From J Hovey, Apples, Early Harvest, very fine, Plums.

From W. W. Wheildon, Concord, Melons, open ground culture.

From W. A. Strong, Grapes, Black Hamburgh, fine, Plums, Bolmar Washington. (?) JOSEPH S. CABOT, Chairman.

FRUITS TESTED.—Seedling Cherries from Henry Vail, Esq., Troy. These cherries were somewhat decayed, and the committee could not so well judge of their quality; but from their being so late, and said to be an abundant bearer, the cherry promises to be a valuable acquisition. The committee would be happy another season to farther test their quality.

Seedling Plum, from Francis Dana. The committee would prefer to wait another season before expressing an opinion.

Grapes. Grizzly Fontainbleau, From Hovey & Co., a round, well-coloured, dark Grape, of good quality.

Christiana Melon, from Mr Richards, fine.

White Frontignan Grapes, from O. Johnson, fine.

Peaches called Jacques, from Hovey & Co., large, well ripened and very fine indeed. JOSEPH S. CABOT, Chairman.

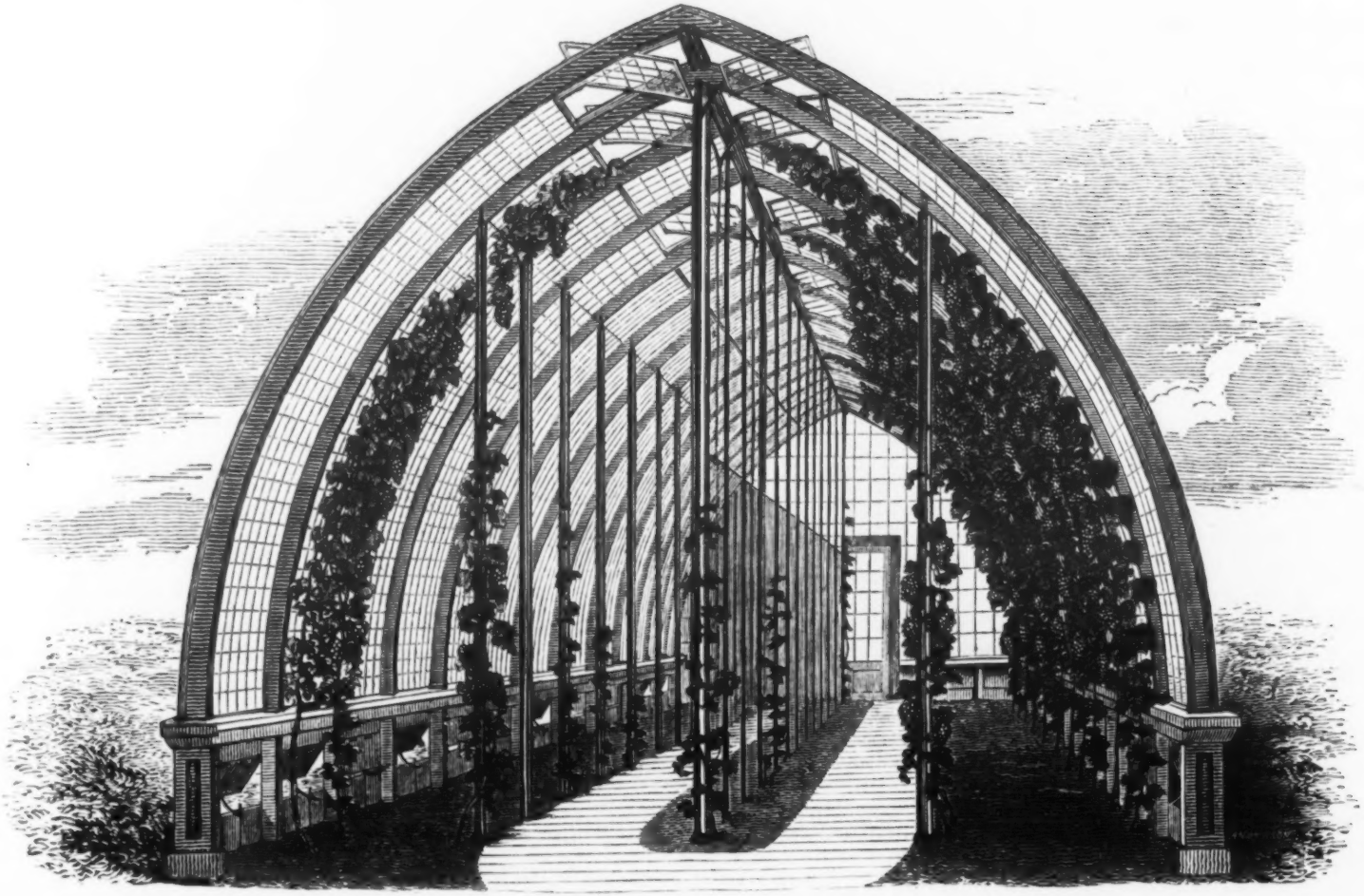
VEGETABLES.—From W. W. Wheildon, Egg Plants and Canada Squashes.

From A. D. Williams, Tomatoes, and Chenango and Early White Potatoes.

From N. Green, by J. McGinnis, one Manchester Prize Cucumber.

From Obed Baker, one root of Herd's Grass, with 174 spires, and 4 feet high, a most extraordinary production.

A. D. WILLIAMS, Chairman.



VIEW IN THE VINERY,

At Clinton Point.

[Hort: Oct. 1849.]